Solicitation 02362-09

SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

Collin County

Bid 02362-09
SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

Bid Number	02362-09
Bid Title	SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT
Bid Start Date	Feb 24, 2009 9:04:57 AM CST
Bid End Date	Mar 19, 2009 2:00:00 PM CDT
Question & Answer End Date	Mar 13, 2009 5:00:00 PM CDT
Bid Contact	Leslie Harper Contract Administrator Collin County Purchasing 972-548-4122 lharper@co.collin.tx.us
Contract Duration	1 year
Contract Renewal	Not Applicable
Prices Good for	60 days
Pre-Bid Conference	Mar 6, 2009 10:00:00 AM CST Attendance is optional Location: 4300 Community Blvd. McKinney, TX 75071
Standard Disclaimer	***Note to Bidders/Offerors~The following standard disclaimer applies to Invitation to Bid (IFB) and Request for Proposal (RFP) ONLY, not applicable to Request for Qualifications (RFQ) or Request for Information (RFI).*** Prices bid/proposed shall only be considered if they are provided in the appropriate space(s) on the Collin County bid form(s). For consideration, any additions or deductions to the bid/proposal prices offered must be shown under the exceptions section of the bid/proposal in the case of electronic submittal, ONLY in the case of a hard copy submittal will an additional attachment be allowed. Extraneous numbers, prices, comments, etc. or bidder/offeror generated documents appearing elsewhere on the bid or as an additional attachment shall be deemed to have no effect on the prices offered in the designated locations. All delivery and freight charges (F.O.B. inside delivery at Collin County designated locations) are to be included as part of the bid/quote/proposal price. All components required to render the item complete, installed and operational shall be included in the total bid/quote/proposal price. Collin County will pay no additional freight/delivery/installation/setup fees.
Bid Comments	Collin County's intent of this Request For Proposal (RFP) and resulting contract is to provide offerors with sufficient information to prepare a proposal develop and refine the data and analysis capabilities of the North Central Texas Fusion System. The project team will report to and be directed by the Collin County Director of Homeland Security. Documentation and transition-related tutorials will be provided by the North Central Texas Fusion System. Added on Mar 9, 2009: Extend RFP to March 19, 2009, at 2:00 pm, extend question period to March 13, 2009, at 5:00 pm. Add "Lessons Learned" document to RFP, and pre-bid sign-in sheet. Added on Mar 9, 2009: Changes made to Section 4.1.1, Evaluation Criteria, and Section 6.4.1, References required. Added on Mar 13, 2009:

Added a revised Lessons Learned document

Changes made on Mar 9, 2009 10:45:36 AM CDT

New Documents	Lessons Learned Pre-bid sign in.pdf ADDENDUM 1.pdf		
Previous End Date	Mar 12, 2009 2:00:00 PM CDT	New End Date	Mar 19, 2009 2:00:00 PM CDT
Previous Q & A End Date	Mar 9, 2009 5:00:00 PM CDT	New Q & A End Date	Mar 13, 2009 5:00:00 PM CDT

Changes made on Mar 9, 2009 2:22:06 PM CDT

New Documents	Request for Proposal.doc ADDENDUM 1.pdf
Removed Documents	Request for Proposal.doc ADDENDUM 1.pdf

Changes made on Mar 13, 2009 11:23:38 AM CDT

New Documents	Updated Lessons Learned.doc

Item Response Form

Item	02362-09-1-01 - SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT
Quantity	1 year
Unit Price	
Delivery Location	Collin County 5801 Homeland Security Homeland Security S/O Admin Lobby #D1602 4300 Community Ave. McKinney TX 75071 Qty 1

Description

Collin County is requesting proposals for a one-year contract to develop and refine the data and analysis capabilities of the North Central Texas Fusion System.
The project team will report to and be directed by the Collin County Director of Homeland Security.

Deliverables will include procedures, policies and implementation documentation; fusion system software; technical reports and recommendations; briefing materials; website updates; demonstrations; analysis reports; and monthly status reports, as well as special reports as requested by the Director of Collin County Homeland Security.

RFP NO. 02362-09

C O L L I N C O U N T Y, T E X A S

REQUEST FOR PROPOSALS
SERVICES: FUSION SYSTEM
DATA AND ANALYSIS DEVELOPMENT

SUBMIT PROPOSALS TO:

Collin County Purchasing
Attn: Leslie Harper
Collin County Courthouse Annex A
200 S. McDonald, Suite 230
McKinney, Texas 75069

****NOTE:**
All correspondence must include suite number to assist in proper delivery.**

SUBMIT NO LATER THAN:

2:00 P.M., Thursday,
March 12, 2009

MARK ENVELOPE:

RFP 02362-09
SERVICES: FUSION SYSTEM
DATA AND ANALYSIS
DEVELOPMENT

ALL SUBMITTALS MUST BE RECEIVED IN THE PURCHASING DEPARTMENT BEFORE RECEIVING DATE AND TIME

If offeror does not wish to submit proposals at this time, please submit a "NO OFFER" by the same time and at the same location as stated above and state the reasons for such.

Offerors must submit this RFP, their response, the signature page, and all additional documents. It is requested that offeror provide one (1) original and Four (4) copies of all documents in a sealed envelope and manually signed in ink by a person having the authority to submit firm's qualifications.

Negotiations should begin not more than fourteen (14) days after receiving date.

Collin County is always conscious and extremely appreciative of your time and effort in the preparing of this information. Requests for information/clarification should be directed to:

Leslie Harper
Contract Administrator
Purchasing Department
Collin County Courthouse Annex A
200 S. McDonald, Suite 230
McKinney, Texas 75069
Telephone:972/548-4122 or;
Metro: 972/424-1460 ext. 4122
Facsimile: 972/548-4694

C O L L I N C O U N T Y, T E X A S
TERMS AND CONDITIONS

1.0 GENERAL INSTRUCTIONS

1.0.1 Definitions

1.0.1.1 Bidder/Quoter/Offeror: refers to submitter.

1.0.1.2 Vendor/Contractor/Provider: refers to a Successful Bidder/Quoter/Contractor/Service Provider.

1.0.1.3 Submittal: refers to those documents required to be submitted to Collin County, by a Bidder/Quoter/Offeror.

1.0.1.4 IFB: refers to Invitation For Bid.

1.0.1.5 RFQ: refers to Request For Qualifications

1.0.1.6 RFP: refers to Request For Proposal.

1.0.1.7 RFI: refers to Request For Information.

1.0.1.8 Quotation: refers to Request for Quotation

1.1 If Bidder/Quoter/Offeror do not wish to submit an offer at this time, please submit a No Bid Form.

1.2 Awards shall be made not more than ninety (90) days after the time set for opening of submittals.

1.3 Collin County is always conscious and extremely appreciative of your time and effort in preparing your submittal.

1.4 Collin County exclusively uses BidSync for the notification and dissemination of all solicitations. The receipt of solicitations through any other company may result in your receipt of incomplete specifications and/or addendums which could ultimately render your bid non-compliant. Collin County accepts no responsibility for the receipt and/or notification of solicitations through any other company.

1.5 A bid/quote/submittal may not be withdrawn or canceled by the bidder/quoter/offeror prior to the ninety-first (91st) day following public opening of submittals and only prior to award.

1.6 It is understood that Collin County, Texas reserves the right to accept or reject any and/or all Bids/Quotes/Proposals/Submittals for any or all products and/or services covered in an Invitation For Bid (IFB), Request For Qualifications (RFQ), Request For Proposal (RFP), Request For Information (RFI), and Quotation, and to waive informalities or defects in submittals or to accept such submittals as it shall deem to be in the best interest of Collin County.

1.7 All IFB's, RFP's, RFQ's, and RFI's submitted in hard copy paper form shall be submitted in a sealed envelope, plainly marked on the outside with the IFB/RFP/RFQ/RFI/Quotation number and name. A hard copy paper form submittal shall be manually signed in ink by a person having the authority to bind the firm in a contract. Submittals shall be mailed or hand delivered to the Collin County Purchasing Department.

1.8 No oral, telegraphic or telephonic submittals will be accepted. IFB's, RFP's, RFQ's, RFI's, may be submitted in electronic format via **BidSync**.

1.9 All Invitation For Bids (IFB), Request For Proposals (RFP), Request For Qualifications (RFQ), Request For Information (RFI), submitted electronically via **BidSync** shall remain locked until official date and time of opening as stated in the Special Terms and Conditions of the IFB, RFP, RFQ, and/or RFI.

1.10 Time/date stamp clock in Collin County Purchasing Department shall be the official time of receipt for all Invitation For Bids (IFB), Request For Proposals (RFP), Request For Qualifications (RFQ), Request For Information (RFI), submitted in hard copy paper form. IFB's, RFP's, RFQ's, RFI's, received in County Purchasing Department after submission deadline shall be considered void and unacceptable. Absolutely no late submittals will be considered. Collin County accepts no responsibility for technical difficulties related to electronic submittals.

1.11 For hard copy paper form submittals, any alterations made prior to opening date and time must be initialed by the signer of the IFB/RFQ/RFP/RFI/, guaranteeing authenticity. Submittals cannot be altered or amended after submission deadline.

1.12 Collin County is by statute exempt from the State Sales Tax and Federal Excise Tax; therefore, the prices submitted shall not include taxes.

1.13 Any interpretations, corrections and/or changes to an Invitation For Bid/Request For Qualifications/Request For Proposal/Request for Information and related Specifications or extensions to the opening/receipt date will be made by addenda to the respective document by the Collin County Purchasing Department. Questions and/or clarification requests must be submitted no later than seven (7) days prior to the opening/receipt date. Those received at a later date may not be addressed prior to the public opening. Sole authority to authorize addenda shall be vested in Collin County Purchasing Agent as entrusted by the Collin County Commissioners' Court. Addenda may be transmitted electronically via **BidSync**, by facsimile, E-mail transmission or mailed via the US Postal Service.

1.13.1 Addenda will be transmitted to all that are known to have received a copy of the IFB/RFQ/RFP/RFI and related Specifications. However, it shall be the sole responsibility of the Bidder/Quoter/Offeror to verify issuance/non-issuance of addenda and to check all avenues of document availability (i.e. **BidSync at www.bidsync.com** , telephoning Purchasing Department directly, etc.) prior to opening/receipt date and time to insure Bidder/Quoter/Offeror's receipt of any addenda issued. Bidder/Quoter/Offeror shall acknowledge receipt of all addenda.

1.14 All materials and services shall be subject to Collin County approval.

1.15 Collin County reserves the right to make award in whole or in part as it deems to be in the best interest of the County.

1.16 The Bidder/Quoter/Offeror shall comply with Commissioners' Court Order No. 96-680-10-28, Establishment of Guidelines & Restrictions Regarding the Acceptance of Gifts by County Officials & County Employees.

1.17 Any reference to model/make and/or manufacturer used in specifications is for descriptive purposes only. Products/materials of like quality will be considered.

1.18 Bidders/Quoters/Offerors taking exception to the specifications shall do so at their own risk. By offering substitutions, Bidder/Quoter/Offeror shall state these exceptions in the section provided in the IFB/RFQ/RFP/Quotation or by attachment. Exception/substitution, if accepted, must meet or exceed specifications stated therein. Collin County reserves the right to accept or reject any and/or all of the exception (s)/substitution(s) deemed to be in the best interest of the County.

1.19 Minimum Standards for Responsible Prospective Bidders/Quoters/Offerors: A prospective Bidder/ Quoter/Offeror must meet the following minimum requirements:

1.19.1 have adequate financial resources, or the ability to obtain such resources as required;

1.19.2 be able to comply with the required or proposed delivery/completion schedule;

1.19.3 have a satisfactory record of performance;

1.19.4 have a satisfactory record of integrity and ethics;

1.19.5 be otherwise qualified and eligible to receive an award.

Collin County may request documentation and other information sufficient to determine Bidder's/Quoter's/ Offeror's ability to meet these minimum standards listed above.

1.20 Vendor shall bear any/all costs associated with it's preparation of an RFI/IFB/RFQ/RFP/Quotation submittal.

1.21 Public Information Act: Collin County is governed by the Texas Public Information Act, Chapter 552 of the Texas Government Code. All information submitted by prospective bidders during the bidding process is subject to release under the Act.

1.22 The Bidder/Quoter/Offeror shall comply with Commissioners' Court Order No. 2004-167-03-11, County Logo Policy.

1.23 Interlocal Agreement: Successful bidder agrees to extend prices and terms to all entities that has entered into or will enter into joint purchasing interlocal cooperation agreements with Collin County.

1.24 Bid Openings: All bids submitted will be read at the county's regularly scheduled bid opening for the designated project. However, the reading of a bid at bid opening should be not construed as a comment on the responsiveness of such bid or as any indication that the county accepts such bid as responsive.

The county will make a determination as to the responsiveness of bids submitted based upon compliance with all applicable laws, Collin County Purchasing Guidelines, and project documents, including but not limited to the project specifications and contract documents. The county will notify the successful bidder upon award of the contract and, according to state law; all bids received will be available for inspection at that time.

2.0 TERMS OF CONTRACT

2.1 A bid/quote/proposal, when properly accepted by Collin County, shall constitute a contract equally binding between the Vendor/Contractor/Provider and Collin County. No different or additional terms will become part of this contract with the exception of an Amendment and/or a Change Order.

2.2 No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All Amendments and/or Change Orders to the contract will be made in writing by Collin County Purchasing Agent.

2.3 No public official shall have interest in the contract, in accordance with Vernon's Texas Codes Annotated, Local Government Code Title 5, Subtitle C, Chapter 171.

2.4 The Vendor/Contractor/Provider shall comply with Commissioners' Court Order No. 96-680-10-28, Establishment of Guidelines & Restrictions Regarding the Acceptance of Gifts by County Officials & County Employees.

2.5 Design, strength, quality of materials and workmanship must conform to the highest standards of manufacturing and engineering practice.

2.6 Bids/Quotes/Proposals must comply with all federal, state, county and local laws concerning the type(s) of product(s)/service(s)/equipment/project(s) contracted for, and the fulfillment of all ADA (Americans with Disabilities Act) requirements.

2.7 All products must be new and unused, unless otherwise specified, in first-class condition and of current manufacture. Obsolete products, including products or any parts not compatible with existing hardware/software configurations will not be accepted.

2.8 Vendor/Contractor/Provider shall provide any and all notices as may be required under the Drug-Free Work Place Act of 1988, 28 CFR Part 67, Subpart F, to its employees and all sub-contractors to insure that Collin County maintains a drug-free work place.

2.9 Vendor/Contractor/Provider shall defend, indemnify and save harmless Collin County and all its officers, agents and employees and all entities, their officers, agents and employees who are participating in this contract from all suits, claims, actions, damages (including personal injury and or property damages), or demands of any character, name and description, (including attorneys' fees, expenses and other defense costs of any nature) brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of Vendor/Contractor/Provider's breach of the contract arising from an award, and/or any negligent act, error, omission or fault of the Vendor/Contractor/Provider, or of any agent, employee, subcontractor or supplier of Vendor/Contractor/Provider in the execution of, or performance under, any contract which may result from an award. Vendor/Contractor/Provider shall pay in full any judgment with costs, including attorneys' fees and expenses which are rendered against Collin County and/or participating entities arising out of such breach, act, error, omission and/or fault.

2.10 If a contract, resulting from a Collin County IFB, RFP, RFQ, Quotation is for the execution of a public work, the following shall apply:

2.10.1 In accordance with V.T.C.A. 2253.021, a governmental agency that makes a public work contract with a prime contractor shall require the contractor, before beginning work, to execute to the governmental entity a Payment Bond if the contract is in excess of $25,000.00. Such bond shall be in the amount of the contract payable to the governmental entity and must be executed by a corporate surety in accordance with Section 1, Chapter 87, Acts of the 56th Legislature, Regular Session, 1959 (Article 7.19-1 Vernon's Texas Insurance Code).

2.10.2 In accordance with V.T.C.A. 2253.021, a governmental agency that makes a public work contract with a prime contractor shall require the contractor, before beginning work, to execute to the governmental entity a Performance Bond if the contract is in excess of $100,000.00. Such bond shall be in the amount of the contract payable to the governmental entity and must be executed by a corporate surety in accordance with Section 1, Chapter 87, Acts of the 56th Legislature, Regular Session, 1959 (Article 7.19-1 Vernon's Texas Insurance Code).

2.11 Purchase Order(s) shall be generated by Collin County to the vendor. Collin County will not be responsible for any orders placed/delivered without a valid purchase order number.

2.12 The contract shall remain in effect until any of the following occurs: delivery of product(s) and/or completion and acceptance by Collin County of product(s) and/or service(s), contract expires or is terminated by either party with thirty (30) days written notice prior to cancellation and notice must state therein the reasons for such cancellation. Collin County reserves the right to terminate the contract immediately in the event the Vendor/Contractor/Provider fails to meet delivery or completion schedules, or otherwise perform in accordance with the specifications. Breach of contract or default authorizes the County to purchase elsewhere and charge the full increase in cost and handling to the defaulting Vendor/Contractor/Provider.

2.13 Collin County Purchasing Department shall serve as Contract Administrator or shall supervise agents designated by Collin County.

2.14 All delivery and freight charges (FOB Inside delivery at Collin County designated locations) are to be included as part of the bid/quote/proposal price. All components required to render the item complete, installed and operational shall be included in the total bid/quote/proposal price. Collin County will pay no additional freight/delivery/installation/setup fees.

2.15 Vendor/Contractor/Provider shall notify the Purchasing Department immediately if delivery/completion schedule cannot be met. If delay is foreseen, the Vendor/Contractor/Provider shall give written notice to the Purchasing Agent. The County has the right to extend delivery/completion time if reason appears valid.

2.16 The title and risk of loss of the product(s) shall not pass to Collin County until Collin County actually receives and takes possession of the product(s) at the point or points of delivery. Collin County shall generate a purchase order(s) to the Vendor/Contractor/Provider and the purchase order number must appear on all itemized invoices.

2.17 Invoices shall be mailed directly to the Collin County Auditor's Office, Sixth Floor, Collin County Courthouse, 200 South McDonald Street, Suite 300, McKinney, Texas 75069. All invoices shall show:

2.17.1 Collin County Purchase Order Number;

2.17.2 Vendor's/Contractor's/Provider's Name, Address and Tax Identification Number;

2.17.3 Detailed breakdown of all charges for the product(s) and/or service(s) including applicable time frames.

2.18 Payment will be made in accordance with V.T.C.A., Government Code, Title 10, Subtitle F, Chapter 2251.

2.19 All warranties shall be stated as required in the Uniform Commercial Code.

2.20 The Vendor/Contractor/Provider and Collin County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

2.21 The Vendor/Contractor/Provider agree to protect Collin County from any claims involving infringements of patents and/or copyrights.

2.22 The contract will be governed by the laws of the State of Texas. Should any portion of the contract be in conflict with the laws of the State of Texas, the State laws shall invalidate only that portion. The remaining portion of the contract shall remain in effect. The contract is performable in Collin County, Texas.

2.23 The Vendor/Contractor/Provider shall not sell, assign, transfer or convey the contract, in whole or in part, without the prior written approval from Collin County.

2.24 The apparent silence of any part of the specification as to any detail or to the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of the specification shall be made on the basis of this statement.

2.25 Vendor/Contractor/Provider shall not fraudulently advertise, publish or otherwise make reference to the existence of a contract between Collin County and Vendor/Contractor/Provider for purposes of solicitation. As exception, Vendor/Contractor/Provider may refer to Collin County as an evaluating reference for purposes of establishing a contract with other entities.

2.26 The Vendor/Contractor/Provider understands, acknowledges and agrees that if the Vendor/Contractor/Provider subcontracts with a third party for services and/or material, the primary Vendor/Contractor/Provider (awardee) accepts responsibility for full and prompt payment to the third party. Any dispute between the primary Vendor/Contractor/Provider and the third party, including any payment dispute, will

be promptly remedied by the primary vendor. Failure to promptly render a remedy or to make prompt payment to the third party (subcontractor) may result in the withholding of funds from the primary Vendor/Contractor/Provider by Collin County for any payments owed to the third party.

2.27 Vendor/Contractor/Provider shall provide Collin County with diagnostic access tools at no additional cost to Collin County, for all Electrical and Mechanical systems, components, etc., procured through this contract.

2.28 Criminal History Background Check: If required, ALL individuals may be subject to a criminal history background check performed by the Collin County's Sheriff's Office prior to access being granted to Collin County. Upon request, Vendor/Contractor/Provider shall provide list of individuals to Collin County Purchasing Department within five (5) working days.

2.29 Non-Disclosure Agreement: Where applicable, vendor shall be required to sign a non-disclosure agreement acknowledging that all information to be furnished is in all respects confidential in nature, other than information which is in the public domain through other means and that any disclosure or use of same by vendor, except as provided in the contract/agreement, may cause serious harm or damage to Collin County. Therefore, Vendor agrees that Vendor will not use the information furnished for any purpose other than that stated in contract/agreement, and agrees that Vendor will not either directly or indirectly by agent, employee, or representative disclose this information, either in whole or in part, to any third party, except on a need to know basis for the purpose of evaluating any possible transaction. This agreement shall be binding upon Collin County and Vendor, and upon the directors, officers, employees and agents of each.

2.30 Vendors/Contractors/Providers must be in compliance with the Immigration and Reform Act of 1986 and all employees specific to this solicitation must be legally eligible to work in the United States of America.

2.31 Certification of Eligibility: This provision applies if the anticipated Contract exceeds $100,000.00 and as it relates to the expenditure of federal grant funds. By submitting a bid or proposal in response to this solicitation, the Bidder/Quoter/Offeror certifies that at the time of submission, he/she is not on the Federal Government’s list of suspended, ineligible, or debarred contractors. In the event of placement on the list between the time of bid/proposal submission and time of award, the Bidder/Quoter/Offeror will notify the Collin County Purchasing Agent. Failure to do so may result in terminating this contract for default.

2.32 Notice to Vendors/Contractors/Providers delivering goods or performing services within the Collin County Detention Facility: The Collin County Detention Facility houses persons who have been charged with and/or convicted of serious criminal offenses. When entering the Detention Facility, you could: (1) hear obscene or graphic language; (2) view partially clothed male inmates; (3) be subjected to verbal abuse or taunting; (4) risk physical altercations or physical contact, which could be minimal or possibly serious; (5) be exposed to communicable or infectious diseases; (6) be temporarily detained or prevented from immediately leaving the Detention Facility in the case of an emergency or “lockdown”; and (7) subjected to a search of your person or property. While the Collin County Sheriff’s Office takes every reasonable precaution to protect the safety of visitors to the Detention Facility, because of the inherently dangerous nature of a Detention Facility and the type of the persons incarcerated therein, please be advised of the possibility of such situations exist and you should carefully consider such risks when entering the Detention Facility. By entering the Collin County Detention Facility, you acknowledge that you are aware of such potential risks and willingly and knowingly choose to enter the Collin County Detention Facility.

2.33 Delays and Extensions of Time when applicable:

2.33.1 If the Vendor/Contractor/Provider is delayed at any time in the commence or progress of the Work by an act or neglect of the Owner or Architect/Engineer, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Vendor/Contractor/Provider's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Owner or Architect/Engineer determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Owner/Architect may determine.

2.33.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that the weather conditions had an adverse effect on the scheduled construction.

NOTE: All other terms and conditions (i.e. Insurance Requirements, Bond Requirements, etc.) shall be stated in the individual IFB/RFQ/RFP/RFI/Quotation Solicitation documents as Special Terms, Conditions and Specifications.

3.0 Insurance: Before commencing work, the Contractor shall be required, at his own expense, to furnish the Collin County Purchasing Agent within ten (10) days of notification of award with certified copies of all insurance certificate(s) showing coverage for all requirements as stated below to be in force throughout the term of the contract.

A. Commercial General Liability insurance at minimum combined single limits of ($1,000,000 per-occurrence and $1,000,000 general aggregate) for bodily injury and property damage, coverage shall include independent contractors coverage at limits of $1,000,000 (only necessary if vendor employs independent contractors). Coverage must be written on an occurrence form.

B. Workers Compensation insurance at statutory limits, including employers liability coverage at minimum limits. In addition to these, the contractor must meet each stipulation below as required by the Texas Workers Compensation Commission; (Note: If you have questions concerning these requirements, you are instructed to contact the TWCC at (512)440-3789).

3.1.2.1 Definitions: Certificate of coverage ("certificate"). A copy of a certificate of authority of self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, OR TWCC-84), showing statutory workers compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.
Duration of the project includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in 406.096) includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

3.1.2.2 The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

3.1.2.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

3.1.2.4 If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

3.1.2.5 The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

3.1.2.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

3.1.2.5.2 no later than seven (7) days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

3.1.2.6 The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

3.1.2.7 The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

3.1.2.8 The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

3.1.2.9 The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

3.1.2.9.1 provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;

3.1.2.9.2 provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;

3.1.2.9.3 provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

3.1.2.9.4 obtain from each other person with whom it contracts, and provide to the contractor:

3.1.2.9.4.1 a certificate of coverage, prior to the other person beginning work on the project; and
3.1.2.9.4.2 a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage

period shown on the current certificate of coverage ends during the duration of the project;

3.1.2.9.5 retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

3.1.2.9.6 notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

3.1.2.9.7 contractually require each person with whom it contracts, to perform as required by paragraphs 3.1.2.1 through 3.1.2.7, with the certificates of coverage to be provided to the person for whom they are providing services.

3.1.2.10By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

3.1.2.11The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

3.1.3 Commercial Automobile Liability insurance shall be no less than $500,000 combined single limits per accident for bodily injury and property damage, including owned, non-owned, and hired vehicle coverage.

3.1.4 Professional Liability Insurance at minimum limits of $1,000,000. This policy must have a two (2) year extended period of coverage, (i.e. tail coverage). If you choose to have project coverage endorsed onto your base policy, this would be acceptable.

4.0 EVALUATION CRITERIA AND FACTORS

4.1 The award of the contract shall be made to the responsible offeror whose proposal is determined to be the lowest and best evaluated offer resulting from negotiation, taking into consideration the relative importance of price and other factors set forth in the Request For Proposals in accordance with Vernon's Texas Code Annotated, Local Government.

4.1.1 The evaluation criteria will be grouped into percentage factors as follows:

30 % Relevant Experience with Fusion or similar system data/analysis development
10% Team Qualifications including management and assigned team members
30% Successful database integration and development of fusion information sharing systems already in place
30% Price

5.0 SPECIAL CONDITIONS AND SCOPE OF SERVICES

5.1 Authorization: By order of the Commissioners' Court of Collin County, Texas sealed proposals will be received for **Services, Fusion System Data and Analysis Development**.

5.2. Intent of Request for Proposal: Collin County's intent of this Request For Proposal (RFP) and resulting contract is to provide offerors with sufficient information to prepare a proposal develop and refine the data and analysis capabilities of the North Central Texas Fusion System. The project team will report to and be directed by the Collin County Director of Homeland Security. Documentation and transition-related tutorials will be provided by the North Central Texas Fusion System.

5.3 Pre-Proposal Conference: A pre-proposal conference will be held at 10:00 a.m., Friday, **March 6, 2009** at the Collin County Homeland Security Office, located at 4300 Community Blvd., McKinney, Texas 75069. All prospective offerors are requested to have a representative present. It is the offeror's responsibility to review the site and documents to gain a full understanding of the requirements of the RFP.

5.4 Term: Provide for a term contract commencing on the date of the award and continuing through and including March 31, 2010, to coincide with the grant award term. This project is funded by UASI 2008 grant funds.

5.5 Funding: Funds for payment have been provided through the Collin County budget approved by the Commissioners' Court for this fiscal year only. State of Texas statutes prohibit the County from any obligation of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that arise past the end of the current Collin County fiscal year shall be subject to budget approval.

5.6 Price Reduction: If during the life of the contract, the vendor's net prices to other customers under the same terms and conditions for items/services awarded herein are reduced below the contracted price, it is understood and agreed that the benefits of such reduction shall be extended to Collin County.

5.7 Price Redetermination: A price redetermination may be considered by Collin County only at the twelve (12) month anniversary date of the contract. All requests for price redetermination shall be in written form, shall be submitted a minimum of thirty (30) days prior to anniversary date and shall include documents supporting price redetermination such as Manufacturer's direct cost, postage rates, Railroad Commission rates, Federal/State minimum wage law, Federal/State

unemployment taxes, F.I.C.A., Insurance Coverage Rates, etc. The offeror's past experience of honoring contracts at the contract price will be an important consideration in the evaluation of the lowest and best offer. Collin County reserves the right to accept or reject any/all of the price redetermination as it deems to be in the best interest of the County.

5.8 Delivery/Completion/Response Time: Vendor shall place product(s) and/or complete services at the County's designated location within 365 calendar days according to the schedule proposed by offeror in section 6.5.

5.9 Delivery/Setup/Installation Location: Locations for delivery and installation will be stated on the Collin County Purchase Order(s). Delivery shall include assembly, setup and installation and shall be included in proposal.

5.10 Testing: Testing may be performed at the request of Collin County, by an agent so designated, without expense to Collin County.

5.11 Samples/Demos: When requested, samples/demos shall be furnished free of expense to Collin County.

5.12 Specifications: The North Central Texas Fusion System Data and Analysis Contract scope of work will include:

5.12.1 Integrating new structured law-enforcement databases into the Fusion System using the already developed formats and processes. Each jurisdictional database will be converted to a format consistent with the National Information Exchange Model then integrated into the Fusion System infrastructure for sharing across jurisdictions. The data will be indexed to allow single-line, single-login queries across all jurisdictional data at once. The entities, metadata, and relationships will be extracted. Geospatial information will be extracted so geospatial queries can be done.

5.12.2 Identifying and incorporating new unstructured data sources that contributes to the Fusion System mission.

5.12.3 Adding the capability to extract links and geospatial information from unstructured data in a format that is compatible with the link visualization tools.

5.12.4 Adding the capability to extract and report statistics from the structured data.

5.12.5 Adding new functionality to the vendor-developed query and visualization tools.

5.12.6 Adding an interface to a geospatial product to automate and optimize the extraction of geospatial coordinates from unstructured data.

5.12.7 Working with transcription and translation users to develop a concept of operations and informational materials.

5.12.8 Adding new informational displays such as radar charts and social network diagrams to the websites.

5.12.9 Developing customized websites for organizations such as emergency management, fire and public health. The interfaces will be developed in conjunction with the Fusion System team and representative users. The interfaces

will be consistent with the format and operational processes of the existing Fusion System tools and data.

5.12.10 Re-hosting the North Central Texas Fusion System software on new servers provided by Collin County.

5.12.11 Producing and distributing two prevention-awareness articles per week. Formatting and adding crime analyst reports and other new information to the websites early every morning.

5.12.12 Expanding computer models to include insights and decision criteria from broader information resources to include structured law enforcement data.

5.12.13 Handling registrations, approvals and training of new users.

5.12.14 Supporting identification, modeling and analysis of the top ten threats to the region.

5.12.15 Data managing to assure that the daily data transfers are received, reformatted, indexed, tested, and loaded into the proper libraries.

5.12.16 Developing and teaching an advanced intelligence analyst training seminar covering intelligence processes and the use of the Fusion System tools.

5.12.17 Providing general support for the multi-discipline users, the intelligence analysts, the crime analysts, the data providers, and the Fusion System Chief. Example tasks may include meetings, briefings, exercises, and demonstrations; configuration documentation and transition to future supporting contractors; training webinars; consultation with data providers; intelligence analyses; website maintenance; formatting data for the analysis tools; meeting facilitation; coordinating sessions on specialized topics; research of tools and processes.

5.13 Proposal Elements: Proposal shall not exceed 10 pages and must cover all of the following items:

5.14 Hourly rate for the level-of-effort hours. If multiple rates are planned, provide each of the rates with a description of the type of work that would cover. Provide an estimated composite rate per hour based on the scope of work tasks.

5.15 Experience and qualifications of the key personnel in the following areas:

a. Programming in Flex, Java, BlazeDS, Perl, and ActionScript
b. Customization and use of analysis and visualization tools: Retrievalware, Starlight, Analyst Notebook, Metacarta
c. Windows and Linux operating systems including IIS, Apache Tomcat, and JBOSS
d. Application of regulations and requirements from National Information Exchange Model, HL7, HIPPA, 28 CFR Part 23
e. Application of law enforcement records management systems, jail management systems, and calls for service data
f. Preparation and teaching of law enforcement and intelligence analysis classes
g. System engineering and Integration of computer systems comprised of commercial and custom products
h. Development of intelligence reports and threat analyses
i. Handling of secure information
j. Operational support of an emergency operations center

5.16 Resumes of at least two key personnel. Include a statement that these personnel will be assigned to this program. State the percentage of their time that will be dedicated to this program. Note that any personnel changes after award are subject to approval by the Director of Homeland Security.

5.17 Description of and a reference point of contact for at least three previous contracts similar to this contract. State the role of the key personnel in these contracts.

6.0 PROPOSAL FORMAT

6.1 The proposal shall, at a minimum, include a Table of Contents detailing sections and corresponding page numbers and shall included but not be limited to information on each of the following:

6.1.1 FIRM OVERVIEW
Offeror is requested to define the overall structure of the Firm to include the following

6.1.1.1 A descriptive background of your company's history.
6.1.1.2 State your principal business location and any other service locations.
6.1.1.3 What is your primary line of business?
6.1.1.4 How long have you been selling product(s) and/or providing service(s)?
6.1.1.5 State how many and the locations where your product/services are in use.

6.2 PROPOSED PROJECT TEAM/STAFF QUALIFICATIONS/EXPERIENCE/CREDENTIALS

6.2.1 Offeror is requested to provide qualifications as well as experience information on Offeror's key personnel.

6.3 PROPOSED PRODUCT(S)/SYSTEM/SERVICE(S)

6.3.1 Offeror is requested to identity the proposed product(s)/service(s) to include but not limited to the following areas:

6.3.1.1 Product(s)/System to include all necessary components to render it complete and operational;
6.3.1.2 Work Plan to include:

6.3.1.2.1 Installation
6.3.1.2.2 Education and Training
6.3.1.2.3. Testing and Support
6.3.1.2.4 Impact on current system
6.3.1.2.5 Warranty
6.3.1.2.6 Maintenance
6.3.1.2.7 Documentation
6.3.1.2.8 Conversion

6.4 REFERENCES

6.4.1 Offeror is requested to include at least five (5) references of similar projects as outlined in Section 5.0. References should include names, addresses and telephone numbers of point of contact. Indicate whether the reference included integration, development and restructure from a system already in place.

6.5 TIME SCHEDULE

6.5.1 Provide a schedule on each phase of the proposed project beginning with program development and ending with the date of operation. The schedule must include all tasks that will require time in the process, such as County review (identify amount of time assumed for each task).

6.6 PRICING/FEES

6.6.1 Provide an explanation of the total cost of the product(s)/system/service(s) showing a breakdown by item. Be sure to include all items necessary to render project complete and operational.
6.6.2 Does the purchase price include installation and training time? If no, state charges.
6.6.3 Does the purchase price include warranty? If yes, state details and time period.
6.6.4 Does the purchase price include cost for modifications? If no, state charges.
6.6.5 Does the purchase price include updates/enhancements? If no, state charges.

6.7 SUPPORTING MATERIALS

6.7.1 Various questions included in this RFP will be used in making a selection and should be addressed by section and number. Offeror is requested to submit with their proposal, five (5) copies of descriptive literature sufficient in detail to enable an intelligent comparison of the specifications of the data and anaylsis tools proposed with that of the requirements stated herein.

6.8 FINANCIAL STATEMENTS

6.8.1 Offeror is requested to submit recent financial statements with their proposal. Audited financial statements are not mandatory. Unaudited financial statements will be accepted. If offeror’s firm does, however, have audited statements, please include a copy with your proposal.

6.9 OTHER PROJECTS INVOLVED WITH

6.9.1 Offeror is requested to provide a list of other projects that you are currently involved with or will be involved with.

6.10 FUTURE DEVELOPMENT

6.10.1 State the percent discount off of manufacturer's latest published suggested list price, percentage markup above cost, and/or hourly rate for installation for additional product(s), future enhancements, upgrades, advancements in technology, etc.. Also state the basis for determining the fee for any additional services required under the same conditions.

Deploying and Operating an Effective Regional Fusion System

Lessons Learned from the North Central Texas Fusion System

10 April 2007

Kelley Stone
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Director, Collin County Department of Homeland Security
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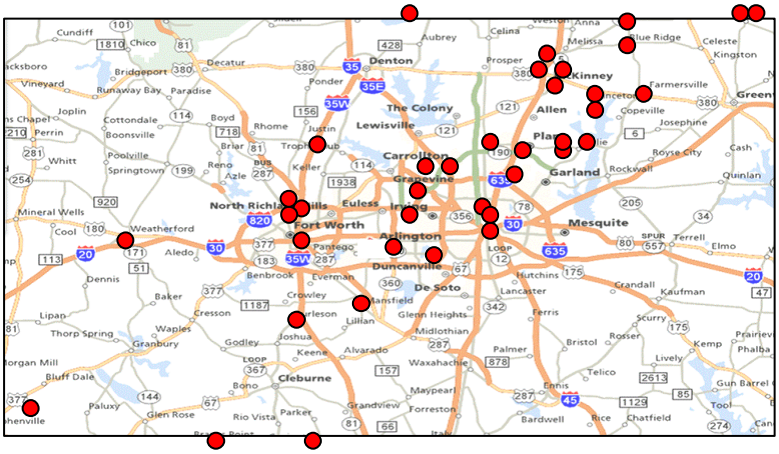
Deploying and Operating an Effective Regional Fusion System
Lessons Learned from the North Central Texas Fusion System

Deploying and Operating an Effective Regional Fusion System
Lessons Learned from the North Central Texas Fusion System

1.0 Introduction

This document is written for planners, developers and operators of regional fusion systems. It encompasses the Guiding Principles for the North Central Texas Fusion System and observations on specific lessons learned during consensus building, deployment, operations and management. There is also a discussion of the sharing and interface guidelines with private security, and state and federal organizations. If you can only read one section, it should be Section 2 - Guiding Principles, because this section describes the characteristics of an effective fusion system. These principles are very important and may not be obvious.

The North Central Texas Fusion System became operational in February 2006. The stakeholders include multi-jurisdictional homeland security, law enforcement, public health, fire, emergency management, private sector security groups and residents as well as state and federal agencies. The Fusion System is primarily focused on the prevention and early warning of natural, accidental and intentional disasters. The Fusion System is also used to support emergency response, field personnel, and investigations. The more than 100 users are from across the 16-county North Central Texas region as shown in the figure below. The project team includes managers, technologists and analysts with deep and relevant experience in local law enforcement, public health, emergency management, and national intelligence.



Users from 42 Regional Jurisdictions/Agencies

The Fusion System is physically located in a secured facility north of Dallas to minimize impacts of large-scale disasters occurring in the downtown Dallas or Fort Worth areas. The Fusion System is a tool for users across the region to share local multi-disciplinary data and access data collected from state and federal sources as well as open sources. Users, such as analysts, emergency response managers, dispatchers, and investigators,

access the system from their own offices via the Internet through secure browser interfaces tailored to each discipline. Reports and alerts are also distributed via email to the stakeholders. Most of the reports are all-hazard and all-discipline focused. They look at trends, observations and predictive elements primarily in support of prevention and preparedness.

The system capabilities include the following items. Additional details on the system are distributed throughout the remaining sections of this document.

- a data collection and aggregation approach that allows analysts to “connect the dots”;
- algorithms that drive the automatic collection of data needed for analysis;
- automatic collection, format, conversion, indexing and storage management per a user-specified schedule;
- tools that automatically detect and graphically display relationships between people, places, and events found in data from open sources;
- access management that assures data is only made available to authorized users and assuring compliance with all statutory requirements and established protocols;
- models that detect pre-incident indicators and draw attention to potential threats;
- analysis tools that extract, visualize, and summarize key concepts from enormous quantities of data.
- near real-time access to multi-jurisdictional data by law enforcement officers in the field;
- tools that automatically and continuously gather targeted data based on user-specified topical requests;
- sharing of data from many jurisdictions and from many organizations at local, state, and federal levels so that disaster response managers can better see the “big picture” including weather, traffic and communications from the field; and
- bringing together of multi-jurisdictional information from law enforcement, public health, fire and emergency management for the post-event investigations.

The North Central Texas Fusion System has received numerous accolades including:

- Selection by DHS as a regional fusion system in which a DHS liaison has been embedded and a Homeland Security Data Network (HSDN) interface has been installed
- Subject of congressional recommendations to U. S. Department of Homeland Security (DHS) Secretary Michael Chertoff
- Winner of Best Practices Outstanding Innovation Award from the Association of Texas Counties
- Designation as a regional fusion system for the State of Texas by Steve McCraw, Texas Director of Homeland Security.
- Subject of two region-wide, all-discipline conferences
- Commended for contribution to solving a local murder case
- Regional coordination center for weapons of mass destruction exercise
- Central data sharing archive for regional gang criminal investigations
- Selected by State of Texas to provide an analysis of recent border operations

2.0 Guiding Principles – Be Sure to Read This First

This section contains the seven guiding principles that have been foundational to the North Central Texas Fusion System. Please read this section first because all the lessons learned are derived from these principles. Please pay particular attention to these principles because the North Central Texas Fusion system team's experience says that all these guiding principles are critical to an effective Fusion System.

Guiding Principle 1 – Processing tools and the aggregation of data across jurisdictions and across disciplines are required to achieve the benefits of fusion.

It is easy to simplify a Fusion System concept so much that the resulting system does not achieve any significant objectives. Single jurisdiction and single discipline systems fall into that category because they are not useful for the inevitable situations where a disaster or crime crosses jurisdictional and disciplinary boundaries. Fusion Systems need to be designed so that clues, pre-incident indicators, and linkages across multiple sources and places can be aggregated to form a big picture. Systems that are just a collection of hyperlinks for humans to click on also fall into the not very useful category. Because of the enormous amount of data in a Fusion System, it is not practical for humans to uncover obscure linkages and pre-incident indicators in the data. Tools that have access to all the data can organize it for visual review by humans. Finally, systems that give one person access to a subset of the data, another person access to another subset of the data and so on, are not effective. Inevitably, each human will filter the data they share and may not even recognize the need to share a piece of data such that the opportunity to deduce meaningful intelligence is missed.

Guiding Principle 2 – Visualization and analysis tools are essential for "connecting the dots".

Fusion Systems, by design, contain massive amounts of data. It is not practical for humans to constantly, thoroughly and quickly analyze that much data. There are very powerful automated visualization and analysis tools, however, that can organize and present the data visually for the human analyst, even drawing the analyst' attention to potential connections and pre-incident indicators found in the data.

Guiding Principle 3 – The most important objective is disaster prevention.

Fusion Systems can contribute significantly to all phases of operations, including the support of disaster responses, personnel operating in the field, and investigations. It should be noted, however, that there are already many systems, procedures, and personnel in place to support the response-oriented activities. To state the obvious, it is far more important to prevent a terrorist attack than to just respond well after it occurs. It is far better to provide early warning of bad weather so that people can take cover than to just get the injured people to the hospital quickly. Be forewarned, that although there is a great deal that can be done to prevent terrorism particularly, the design is challenging because everyone tends to think in terms of response and recovery.

Guiding Principle 4 – Disasters are best prevented by multi-disciplinary organizations

Terrorists, criminals and other hazards are asymmetric in general and cross many disciplines to achieve their goals. Local law enforcement, public health and other single mission organizations do not have the charters to cross disciplinary boundaries. Regional fusion systems and centers should report to a broader organization such as a county or state department of homeland security with the added coupling to public health, emergency management and fire. This allows intelligence analysts to span disciplines in searching for threats. Analysts working in these centers should be licensed in appropriate disciplines such as law enforcement and public health.

Many fusion centers have been setup within local law enforcement organizations. This can severely limit their ability to cross disciplinary boundaries for several reasons: 1) their mission is law enforcement, 2) their primary mission is to provide support for the jurisdiction in which they reside and 3) there is usually activity to keep them busy on tactical tasks so that strategic intelligence is neglected or minimized.

Guiding Principle 5 – The more data the better.

There is a natural human tendency to summarize, filter, or limit data. This is not a healthy approach for a Fusion System, however, because the key piece of data that solves a crime or identifies an imminent terrorist attack is likely to be in the data that is discarded. The Fusion System team should strive to bring together as much data as possible from as many sources as possible and in as much detail as possible to maximize the potential for finding the key data or being able to put together a complete picture.

Guiding Principle 6 – Cross-disciplinary analyst(s) need to be assigned to constantly explore the data and test hypotheses.

The analysis process for a Fusion System is very different from an investigation for prosecution, very different from a database query, and very different from a reporting system. It is more like the intelligence collection process because it entails developing and testing hypotheses; studying linkages and patterns in the data; and sharing known information to solicit other related information. The goal would be to uncover indicators that can help authorities to preposition resources to head off an incident by changing the circumstances leading up to it. It takes a dedicated, open, tenacious, curious and proactive person to achieve the full benefits.

Guiding Principle7 – Data is shared best through a web interface-based system

Use of web-based interfaces to allow both interactive and software agent-based queries of information residing on external fusion systems can provide rapid sharing of information. The data can be managed by the data generators instead of being managed by a third party who does not understand the data or the collection environment. Sharing via web-interface will also result in lower costs of implementation and shorter times to operational states (the ultimate goal). We found

that this approach worked best for sharing with regional users as well as sharing with other fusion centers.

Note that each fusion system has many data types including both structured and unstructured data. More than half of the data on the North Central Texas Fusion System are unstructured products such as autopsy reports, inmate telephone recordings, case reports, weather reports, public health reports and open source data. The National Information Exchange Model (NIEM) is used for exchange but it only applies to structured databases. This implies that these centers 1) know how to handle the data, 2) know how to safeguard the data, 3) know how to handle expunged records, and 4) have the capabilities to extract information both from structured and unstructured sources. We are formatting for exchange using the NIEM model but we feel that the web-based exchange of information rather than the NIEM-based exchange of raw data is a better generalized approach.

3.0 Consensus Building Lessons Learned

An effective Fusion System incorporates new ideas and tools that are not automatically in everyone's knowledge base. An effective Fusion System must span organizations that are not used to working together and may not even know each other. Building consensus on a simple project is difficult – building consensus on an effective Fusion System is very non-trivial. The North Texas Fusion System team has spent 3 years building regional awareness and consensus. To date we have:

- Met with 3000 stakeholders from coast to coast
- Sponsored 2 regional conferences
- Held 7 region-wide brainstorming sessions
- Had 40 vendors and standards meetings
- Visited 11 other facilities for ideas
- Got feedback from over 200 demonstrations

Some of the lessons learned are described in this section.

3.1 Building Consensus on Fusion System Concepts

- **The team needs to be articulate, tenacious, passionate about the concepts, and willing to do hundreds of customized briefings and demonstrations.** The lesson we learned was clear – the project would be "sold" through thousands of personal interactions. Fortunately, it was the nature of the team members to be respectful of everyone's ideas; to package the concepts in words, pictures, and examples that were relevant to the recipient; and to stay at the concept level rather than getting into the technical "weeds".

- **If what you are doing is right for the region, then be bold.** Within a local or a state organization, there are people who have the responsibility for making decisions and leading. At the regional level, generally no single person has that authority, so decisions are often caused by whoever is bold enough to assert their point of view.

Our advice would be to do some soul-searching about whether what you want to assert is really what's best for the region. If it is, then take the actions to make the right thing happen. In the case of North Central Texas, for example, the Fusion System team boldly held conferences, established websites and sought Congressional funding in the name of the region. Over less than a year's time, the Collin County Fusion System became the North Central Texas Fusion System in a very natural way.

3.2 Building Consensus on Data Sharing

We definitely encountered far less resistance at the regional level than is exhibited at the federal level. However, we found that every organization's default position is to not share their data. This position is caused, largely, by fear of losing control of the data or of the data being used inappropriately, unethically, or illegally. There are also concerns about implementation cost. The North Central Texas Fusion System has been moderately successful with data sharing to date. We had hoped to be in a state where at least half of the key data was being shared by this point in time. In actuality, about one quarter of the key data is currently being shared, primarily because of interfaces taking longer than expected. Some of the lessons we have learned are:

- **Facilitated brainstorming was key to most of our success.** Brainstorming does not force ideas on people, it let's people reach their own conclusions while thinking about a realistic situation. For example when brainstorming on how to prevent a dirty bomb before it is detonated, the participants realize that they need observations from law enforcement, emergency management, fire, and public health to be able to put together the pieces. Teams brainstorming on how to minimize an avian influenza outbreak, realize that all regional jurisdictions need to be prepared to share much more information about hospital resources, airplane manifests, etc than is in place today. People brainstorming on the response to a multi-jurisdictional tornado identify the need for more cross-organizational communications and information sharing than they have today. People brainstorming on using the Fusion System to support a criminal investigation realize that criminals do not restrict their activities to one jurisdiction and that the broader the data, the better. We found that, without fail, the personnel who participated in brainstorming sessions always became supporters and always improved on the previous thinking.

- **Head off concerns about the proper handling of law enforcement and public health data.** Law enforcement personnel justifiably have concerns about law enforcement sensitive data being handled properly. We found that if we started every briefing by explaining how law enforcement sensitive data would only be made available to properly accredited law enforcement personnel and by explaining that every data owner could designate how their data would be used, the concerns became non-issues. We found that public health personnel justifiably had major concerns about the invasion of privacy or violation of HIPAA regulations. In this case, it was critical to explain how the data access was limited to approved public health personnel only and that only the observation, not the individual's name, needed to be shared.

- **Do not require programming from the data providers.** We found that virtually every potential data provider either did not have the programming expertise or the resources to format data for transfer to the Fusion System. We decided early in the project that the North Central Texas Fusion System team would bear the effort and cost of any data sharing implementation. We always announce that early in meetings so the potential data providers stop worrying about the resource problems.

- **Use the Fusion System to help with current issues – it always leads to improved data sharing.** A good example is the use of the Fusion System to help with two active murder cases. In both situations, the law enforcement personnel saw the value of the system to access data and build crime pictures and the value of sharing their information with other jurisdictions.

3.3 Building Consensus on a Consolidated Fusion System

- **Regional conferences established the Fusion System as a regional institution.** Two large scale, cross-discipline, regional conferences have been held so far. In both cases, they were held at major universities, encompassed a large amount of information transfer, and included opportunities for personnel from different jurisdictions and disciplines to interact and share ideas. The conferences were enormously expensive in terms of preparation time and event coordination time, but in each case, a giant step was taken toward a unified vision for the Fusion System.

- **The visible support of legislative representatives and regional executives gives credibility to the project.** The North Central Texas Fusion System team made numerous trips to Austin and Washington D.C. to educate and solicit support for the project. Numerous briefings were also made to regional elected officials, business executives, and college executives. Not only did we receive valuable feedback and encouragement from these people, but their participation and communications gave credibility to the project.

3.4 Building Consensus on Becoming Users of the System

- **Do away with cost concerns by making the system free to users.** Most Fusion Centers try to fund the system through fees to the users. We found this concept to be a significant show-shopper, particularly in the smaller jurisdictions. One of our key decisions was to bear the burden of funding the system. A significant amount of time is spent in seeking funding and writing proposals but, as a result, we have no reluctance to participation.

4.0 Deployment Lessons Learned

This section describes the development and rollout aspects of the North Central Texas Fusion System, particularly the six months of initial implementation. Note that the operational aspects are covered in section 5.

4.1 Collection

Data collection and aggregation are critical to bringing together “dots” to connect. Information about bioterrorism threats can come from local law enforcement and public health reports, medical examiner cause of death sheets, private sector security personnel, state and federal reporting agencies and open sources, for example. The data should be organized to provide only authorized access and to support cross-disciplinary queries by authorized personnel.

- **Develop essential elements of information to help guide collection and to optimize analysis.** An essential element of information (EEI) is a description of the information required from various thematic groups and documentation of what to do with the data. The EEIs are incorporated into a living document that can be updated based on emerging topics and lessons learned during the operational phases.

  The North Central Texas Fusion System EEI document is multi-disciplinary and is divided into categories such as terrorism, public health, major crime, and severe weather. Within these groups are specific topics with information on specific information required, the example data sources, collection frequencies, authorized distribution groups and data handling recommendations. The EEI document is an addendum to the emergency response plan. The applications of the EEI Document are twofold.

  1) The collection sources and query parameters are taken from the document. For example, the North Central Texas Fusion System collects data from many websites daily. The data is collected using both a multi-agent query engine requiring keywords and queries and a website spidering tool that gathers all links within a specified starting Internet address.
  2) Essential elements have been incorporated into analysis tools as options to help improve performance in the identification of “dots” and the “connecting of dots”. For example, the HLS Reporter (Homeland Security Summarization Tool) software carries out entity extractions and summarizations using modes corresponding to the EEI categories.

- **Collect data 24x7 using automated scheduled collection software agents that are not biased in their collection priorities.** The North Central Texas Fusion System is set up to operate 24 hours per day, seven day per week, and 365 days per year. The intelligence analyst and other people using the system typically do not keep such schedules. However, threats from natural, accidental or intentional causes can be emerging at any time. Utilizing software agents to collect data and perform some preliminary analyses can result in the following:

  1) provide continuous collections across all disciplines for data that is time sensitive,
  2) collect data using the essential elements of information for all disciplines that does not leave out information based on preconceived biases or special interests, and
  3) notify analysts when linkages between indicators are discovered.

  The data should be collected using automated collection tools to prevent bias in the data. For example, if an investigator is interested in nuclear threats collects data, it

is likely that data about chemical and biological agents will be collected. It is also unlikely that pre-incident indicators pertaining to all sorts of criminal and terrorist threats as well as public health threats will be collected. An analyst with a law enforcement background will collect different content than an epidemiologist or a trained intelligence analyst. The key lessons learned pertaining to collection are discussed below.

- **Partition new Internet data into separate folders as a function of time.** Google queries of the Internet generally produce results that can span many years and many similar events. For example, when a tornado stuck the North Central Texas region in 2006, a query of the Internet on tornados in the region was made. Results from tornados dating back 10 years were retrieved. When this data is summarized and linked, the multi-year results cloud the current situation.

  The North Central Texas Fusion system overcame this long-term data holding issue by collecting data daily (or at some predetermined frequency) and storing only the new (changed) files into a directory numbered for that collection date and time. Thus, summarizations and analyses of the data can be based on data from a specified time period. The collection procedures also push queries by discipline into specific sub-directories for each date so that disciplinary-focused queries can be carried out on specific time-periods as well.

- **Create data libraries that align with disciplines to facilitate data access management and indexing schedules.** In the North Central Texas Fusion System, data libraries have been organized by discipline to support access and protection. For example, law enforcement and public health data are managed in two different library areas. Within each of these areas, the data is further segmented by jurisdiction. When a user logs onto the system and selects the query function, they only see the data libraries that they are authorized to see. .

  The North Central Texas Fusion System data management and indexing software operates over a range of databases, including Microsoft's SQL Server and Oracle's database products. This solution allows for growth as well as the speed necessary to support hundreds of users. We have used this solution in the past to handle over 200 million files. The data growth is limited only by the storage capacity of the system.

- **Link directly to databases instead of only providing hyperlinks to web pages**. Most fusion centers create user interfaces by bringing together hyperlinks to web pages. Many of these web pages require individual accesses (login and password). One major jurisdiction has more than five of these special access interfaces on their main user interface. This model is NOT information sharing, but simply a means of collocating links for individuals to access websites.

  To achieve the true power of a shared, efficient fusion system, it is necessary to provide linkages directly to the data and databases for each jurisdiction and discipline area in the region, state and federal levels. This allows models and

knowledge discovery tools the ability to operate across these databases and connect the dots.

- **Allow a large amount of time for the implementation of data sharing.** The North Central Texas Fusion System experience was that the agreement to share data was typically benefit-based and quickly reached. What took a long time, however, was the last step where the technical details of the formats and protocols were resolved. We didn't find that the step was technically difficult; it was more an issue of the people being inexperienced, not empowered or overly busy. We have definitely applied ten-fold the amount of time on this activity that was originally expected.

4.2 Software

There are three major types of software used in the North Central Texas Fusion System: 1) commercial-off-the-shelf 2) tailored 3) and custom. The commercial-off-the-shelf (COTS) software includes the major software components for data management, collection, analysis and dissemination. The tailored software components consist of configuration files that support the COTS software and scripts that provide user interfaces and format data so that it can be ingested by the different COTS software packages. The custom software was minimized and restricted to products that were not available commercially. The custom software is primarily in the form of threat models and pre-incident indicator models. The lessons learned concerning software are the following:

- **Invest in enterprise COTS software that is web enabled.** The North Central Texas Fusion System is a distributed environment that allows users to access its functionality and share data from their own offices. The advantages include broader participation, more data sharing, no travel requirements, reduced costs and a faster paced environment to head off large-scale incidents.

  When investigating COTS products, it is advisable to ensure that the products are web-enabled (can be accessed via a browser), that the cost model is not linearly scaled by the number of users, and that there will be no surprise costs for functionality that is sold separately.

- **Invest in COTS indexing and data management software that links to analysis tools and requires minimal configuration.** There are a number of COTS data indexing and querying products on the market. Some require a significant amount of configuration by an expert with many years of experience. The North Central Texas Fusion System team purchased the indexing product that fit the available budget constraints. With hindsight, we see that we made a poor decision because much effort has been required to configure the software and interface with the vendor. It is also wise to purchase as much of the required functionality as possible with the indexing software rather than having the costs and delays associated with the integration of separate products.

4.3 Analysis

Analysis consists of a wide range of processes and algorithms that allow identification of relevant pieces of information to be put into context with a bigger picture. The lessons learned include:

- **Link analysts across the region to provide wide viewpoints and many people working on the data with over-arching intelligence analysts creating global products.** Many domain specialists in the region perform analysis. Epidemiologists and gang specialists, for example, can take in requests for specialized investigations. The intelligence analysts responsible for putting together a global, all hazards picture can integrate the results of these various analysts. By forming a regional network of analysts, the awareness, training and cross-jurisdictional information sharing will increase and the quality of the products will be improved.

- **Utilize graphical analysis, automated summarization, and entity extraction tools to aid in analysis of high data volumes.** As the volumes of data increases, manually identifying and extracting important information elements becomes an overwhelming task. When dealing with massive amounts of data, viewing each piece of data in the context of a given topical area becomes virtually impossible.

  Automated summarization tools bring together "important" sentences or pieces of information on individuals and organizations based on algorithms and the essential elements of information. The summarization process pulls together information from thousands of documents, identifies important documents and enables rapid understanding of the complete data holdings. Automated entity extraction tools extract people's names, addresses, phone numbers, businesses, events and relationships. The results can be ingested into link charts for visual analyses. Automated summarization and entity extraction tools are critical for handling massive data volumes. They also save considerable time and money over the long term.

  Graphical visualization of links and multi-dimensional data has been found to significantly enhance the ability to relate information to the big picture. For example, the North Central Texas Fusion System Intelligence Analyst carried out link analysis of a murder case that helped to identify the suspect and lead to an arrest. Multi-dimension data visualization enables comparing the many dimensions inherent in law enforcement and public health databases. These tools also enable links to maps showing location trends and temporal occurrences of observations and events that could lead to a major incident.

- **Apply foreign language processing tools to aid in understanding of languages used by gangs and terrorists.** Gangs such as MS-13 and Islamic terrorist groups often communicate in languages other than English. These languages can include Arabic, Spanish, and Chinese as well as slang or code words. The North Central Texas Fusion System has identified language tools to aid in analysis of foreign and English languages. Some example applications are:

  - Jail inmate telephone calls are typically recorded. Speech-to-text recognition software for these recorded telephone calls can be used to detect conversations were crimes are being plotted or inmates are being recruited to Islamic gangs. If

these conversations are in foreign languages, then automated translations of these conversations can be achieved.
- Websites that are in foreign languages can be translated to English to see what is actually being said.
- Television and radio broadcasts can be converted to text and queried for keywords. The video and audio are divided by paragraphs or pauses. Thus, when keywords are located, only that portion of the broadcast needs to be reviewed. Therefore, broadcast data can be placed into the system databases for easy analyses.

- **Maximize query capabilities.** We have found enormous power in the ability to query all of the data at once with a single, simple query. We have also found great value in offering standing queries, geospatial queries that provide information based on a map position, and in threat models being able to query the data for pre-incident indicators.

4.4 Dissemination

Dissemination is the process for making information and alerts available to users of the system. There are two issues concerning dissemination: 1) distribution list and 2) means of distribution. The lessons learned with respect to these issues are discussed below.

§ **Do not distribute regionally focused reports to state and federal personnel routinely**. Evaluation of threats to a region sometimes involves analysis of events, relationships and trends that come from outside of the region. For example, tracking emerging infectious disease trends or looking at illegal alien migration into the region involves data collection and analysis of the big picture and how it affects the region. We have found that some state and federal representatives view this analysis as getting into their "turf". We have found that some state and federal representatives think that the role of a regional Fusion System is simply to provide information to them, apparently not understanding the responsibility the Fusion System has to the region. We initially sent the North Central Texas Fusion System bulletins and reports to many people inside and outside the region. The information dissemination has evolved, however, such that the numerous bulletins and alerts that are regional in focus are distributed only to regional stakeholders. Specific alerts derived from local law enforcement and public health data are shared with state and federal agencies when the information would be relevant and valuable to them.

- **A combination of pushed and pulled information access is required.** The North Central Texas Fusion System algorithm is to push out all-hazard information to the broad user base on a regular basis via email. A subset of the constituents also has or will have secure logins to the system so that they can access the information they are authorized to see. Authorized users have access to the secure chat function as well. Note that law enforcement sensitive data and public health private data are distributed through limited email

distributions or through secure system logins, depending on the nature of the information.

4.5 Hardware

From a hardware perspective, the lessons learned include the following:

- **Provide backup equipment to support security and redundancy needs.** We recommend the following backup equipment:
  - An uninterruptible power supply that lasts for at least 2 hours
  - Backup servers for websites
  - Backup servers which automatically copy the data in real time
  - Backup copies of the data in a separate location
  - Backup Fusion System in case of facility destruction (we currently utilize an engineering testbed which is also used for maintenance and development support)
  - Redundant network interfaces
  - A fiber network that does not utilize telephone switches

- **Provide a high bandwidth and secure network to support data collection and a distributed user base.** High bandwidth fiber internet service providers or the local colleges and universities have infrastructures that can be leveraged. The North Central Texas Fusion System, for example, has a goal to utilize an existing 10 gigabit per second fiber network of the local community college to connect county and city offices. There are also plans to extend this network to the entire region, state and nation using the Internet 2 (622 megabit per second) backbone of the local university consortium. It also utilizes dual internet service provider feeds (one for input and one for output) for security reasons and to ensure sufficient bandwidth to the over 300 users in the region.

4.6 Integration

Integration is critical to ensuring that all commercial-off-the-shelf (COTS) software is properly configured; that data is passed between COTS software products correctly; that the data can be access, collected, processed, analyzed and disseminated; and that all functions operate the way they were intended. Our lessons learned are based on many years experience in designing and integrating similar systems for the federal and regional governments.

- **Integrate the software packages with a simple user interface and automate the movement of data between the packages.** The North Central Texas Fusion System team found that most users were either very short on time or were not very computer savvy. The software package interface and the data flow between them must be very straightforward and efficient to assure a high level of continued usage by the regional stakeholders. We also found that by not requiring the users to deal with technical details, we reduced the training requirements significantly.

- **Use a spiral development approach to enable operational activities early.** If the system is properly planned and designed, integration can proceed in phases where at the end of each phase there are increased capabilities. The first spiral should provide initial capabilities in a reasonably short period to ensure that basic homeland security protections are in place quickly. If a development test environment is set up, then the spiral steps can be carried out without interrupting operations.

- **Maintain flexibility in design and maximize the use of standards so that the plethora of different data interfaces can be accommodated.** We have learned that virtually every data source and every user has unique interface and operating requirements. There are a number of ways to achieve the required flexibility:

    - Acquire software that can handle many data formats (typically more than 300)
    - Implement NIEM standard for data exchange
    - Design in the ability to interface to many database standards such as Microsoft SQL Server, Oracle, Dbase, flat files and others.
    - Design in the ability to handle extensible markup languages (XML) and hypertext markup languages (HTML)
    - Have resources to rapidly parse files such as XML, HTML, and Microsoft Office components
    - Have the ability to handle standard data interfaces such as the Really Simple Syndication (RSS) standard used by many news feeds and the Global Justice standards for law enforcement data.
    - Utilize CGI programming scripts that can rapidly configure user interfaces typically not supported by commercial products

- **Avoid forcing local jurisdictions to modify their data formats.** Many regions have small cities that do not have the resources to implement upgrades to their databases or computer services. The North Central Texas Fusion System uses the philosophy that city jurisdictions should be provided user interfaces that only require a browser and that the data is accepted in the existing formats. It is up to the Fusion System to add standards-based wrappers around the data for sharing with the state and federal agencies.

- **Leverage other projects when possible.** It is natural for there to be multiple data handling projects going on in a region. The North Central Texas Fusion System team believes that it is best politically and economically to embrace and leverage as many of the other projects as possible. The North Central Texas Fusion System, for example, hopes to leverage a regional project led by the Council of Governments to integrate over 70 law enforcement jurisdictions and provide database access to the Fusion System analyst tools. A similar program is ongoing at the state level where jurisdictions external to the region will be accessible to the Fusion System. Each of these projects is adding the Global Justice XML standards around the local data.

4.7 Security

Security is critically important to the North Central Texas Fusion System for the following reasons:

- The system contains sensitive data from law enforcement, public health and other government agencies.
- Intelligence analysts are developing hypotheses of potential threats to the region and do not want the media or public to assume that they are imminent.
- There is data that needs to be protected for privacy, investigative and security reasons. Examples are autopsy reports, criminal investigation data, and data on suspected terrorists.
- Conversations between government officials, when planning responses to incidents, need to be protected.

The security of the North Central Texas Fusion System utilizes information technology standards employed by the intelligence community. Several of the lessons learned are:

- **Utilize NIST guidelines for operating secure web server environments.** The National Institute of Standards and Technology (NIST) has developed guidelines for operating secure web servers that should be employed in fusion systems. These standards have been developed by many experts and will save the region the expense of attempting to arrive at these standards on their own. The NIST has documentation on establishing secure networks, secure web servers and other secure information technology components necessary to set up a fusion system. The North Central Texas Fusion System utilized layers of security to protect individual databases and used unexpected port numbers. By staying away from these traditional ports, the system is less likely to encounter denial of service attacks and other hacker attacks.

  The North Central Texas Fusion System also has several security layers to protect data in the user interfaces as well as in the operating system and application layers. There are also monitoring capabilities that log when users enter the system and track which web pages and data are being viewed. This logging process provides an evidence trail in cases of data abuse by authorized users.

- **Consider hiring a systems engineer with secure systems experience to set up and test the critical security infrastructure.** We have discovered that most IT organizations do not have the experience in handling secure server environments. Many organizations may need to hire a systems engineer with expertise in secure data handling and web server systems.

- **Organize data by discipline and jurisdiction.** Since the Fusion System is operating with data from many disciplines and jurisdictions, it is necessary to organize the data so that it can be easily protected. The data is best organized by discipline and then by jurisdiction. For example, law enforcement data is contained within the same data storage region, but segmented by jurisdiction. If a user is allowed to view all law enforcement data except certain investigation cases, then the access rules can easily be established. By having the data in a single major

directory, the indexing management and the library access management is straightforward.

- **Operate the system with Secure Socket Layer protocols and do not utilize public website interfaces.** Since the authorized users interface to the Fusion System via the Internet, the use of secure socket layer (SSL) technology with secure certificates is employed to secure the communications. All Fusion System websites should utilize SSL standards so that no information is transferred through unsecured channels.

- **Design for stand-alone computers to handle classified information**. If classified information is to be utilized, then by law, this data must be handled in a Special Compartmented Information Facility and the computers must be disjoint from the servers and networks used by normal fusion system operations. By law, these stand-alone computers must adhere to the DSCID-6 standards. In designing the server room for the Fusion System, allowances for Special Compartmented Information Facilities and secure computer requirements need to be taken into account.

4.8 Roll-out

Once a Fusion System is operational, some may want to instantly let any authorized user start accessing it. We have received requests from all over the region, and even outside the region, for access. Instead of granting access to the system on a first come request, we have set up a more structured process to ensure 1) that the operational processes are understood, 2) that a reasonable amount of functionality and data are available to the users and 3) that the new users experience minimal complications. The lessons learned from this process are the following:

- **Populate data and functions for each discipline prior to roll out to that discipline.** The fusion system will not be satisfactory to the users if there is minimal benefit to them. In each discipline, there are data providers and data users. The data providers should be the first system users in each discipline. The goal is to populate data for each discipline prior to allowing data users access to the system. For example, in the public health area, we set up an interface for the medical examiner and epidemiologist to ingest over 20 years of autopsy data. This provided a baseline of health data for users to query. Similar activities have occurred in law enforcement where data from over 70 jurisdictions was integrated before users were given access. When the users are finally provided access, they will be able to see the power of accessing large volumes of data with powerful analysis tools. It is also important to integrate the data with the analysis and visualization tools before bringing on users.

- **Develop a unique web interface for each user group**. Our brainstorming sessions and other user interactions taught us that each user group needed a unique interface. The North Central Texas Fusion System team found that the users' terminology and interests were significantly different and that there was no hope in having a single user interface be effective for all user groups. These individual

interfaces were developed through collaborating with the stakeholders in each discipline.

- **Apply a rollout process for each discipline.** The user interfaces are tailored to each jurisdiction and discipline in order to 1) utilize familiar terminology and 2) provide applicable functions to each group. Developing these interface requires several steps:

    - Hold brainstorming sessions with regional participants within a discipline area to understand the functional and information sharing needs
    - Work with a small group within a discipline to refine the user interface
    - Roll out the interface to the small group
    - Incorporate feedback after a few weeks of operational application
    - Finally, rollout to the larger population within the discipline

- **Provide training by webinar.** Webinars are an inexpensive, quick way to provide training. They are particularly attractive to the supervisors of the trainees because there is no cost for the training and the trainee can attend the training course from their own office.

4.9 Development Team

The deployment personnel lessons learned included the following:

- **Keep the development team as small as possible while encompassing a mission visionary, an application specialist and a system specialist.** The technical team for the implementation of the North Central Texas Fusion System consisted of only two people, a visionary/application specialist and a systems specialist. Even with an ultra small team that encompassed all the required skills, there were still almost daily cases of one person doing something unknowingly that affected what the other person was implementing. Experience clearly showed that coordination problems go up exponentially with the number of people involved, the project slows down, and the costs go up as more people are added. It is vitally important, however, that the team include all the critical components: a mission visionary (else a simplistic, almost valueless system will be envisioned), an application specialist (else the availability and value of the outstanding commercial products will not be recognized), and a system specialist (else the system will not be secure and robust).

- **Use a development team that has done something similar before.** If the team is starting from scratch, it is extremely likely that the project implementation costs will be in the millions, that the implementation time will be measured in years, and that there will be a high risk that the resulting system will not be very effective. The development of a robust fusion system requires expertise that is not easily developed from scratch - a broad range of development and integration skills; a first-hand knowledge of hundreds of commercial products; and a non-tradition vision of sharing data.

- **Avoid cross-organizational development or hosting.** For the North Central Texas Fusion System, a regrettable decision was made to host the system on County network managed by an internal information technology (IT) group. The development team and the network management team each had reasonable operating objectives but unfortunately, they were dramatically at odds. For example, the IT group had multiple masters to serve so they did not have the same sense of urgency or immediate availability of resources as the development team. The result was more than six months delay in the overall project. Further, the IT group's expertise did not match the project needs. The IT organization also had equipment and network standards that were meant to assure high reliability and security for the County network. Unfortunately, those standards increased the system hardware costs by a factor of four and resulted in reduced network speed by a factor of one hundred. If we could have a "Do Over", we would have made the Fusion System a stand-alone system completely implemented by the development team.

5.0 Operations Lessons Learned

This section describes the operations aspects of the North Central Texas Fusion System. This section is organized by the different phases that the system supports. Note that the deployment aspects are covered in section 4.

5.1 Prevention, Preparedness and Early Warning

- **Apply visualization, modeling and analysis tools across all the data to identify threats and pre-incident indicators.** The North Central Texas Fusion System is moving as quickly as possible to having a team of full time analysts. The analysts will proactively build and refine models of how attacks and disasters may occur, and then apply automated tools to look for model's pre-incident indicators. When suspicious indicators are identified, the appropriate law enforcement organizations are immediately given the information in case investigative or surveillance activities are merited.

- **Educate and raise awareness through bulletins.** The North Central Texas Fusion System distributes an Indications and Warnings Bulletin several times a week to over 300 regional personnel. This bulletin contains all-hazard information that is preparedness and prevention oriented. All of the bulletin items are comprised of information from multiple sources and include editorial comments about the relevance of the data to the region. Many of the bulletin items are be-aware-that oriented or be-on-the-lookout oriented.

  The Fusion System also distributes a Directed News Bulletin at least once a week to draw attention to relevant threats and activities being reported in the news. Alerts are also sent out in PDA-ready formats to notify personnel about time-critical threats.

- **Don't discredit open sources.** Reporters often bring forward valuable information and observations. Although one piece of open source data cannot be taken as a fact, multiple corroborating sources bring more credibility and can prompt further

investigation and research. Observations from citizens, private security personnel and regional government personnel can also be enormously valuable. They should be actively solicited.

- **Use classified data for tip-offs if possible.** Regional Fusion Systems do not typically need classified data except as tip-offs to draw attention to potential regional threats. If possible, incorporate at least one cleared person on the team so that classified data can be accessed and/or classified conversations can be held with federal agencies.

- **Train regional personnel to use the tools for their own prevention and early warning analysis.** The North Central Texas Fusion System is currently conducting demonstrations for regional personnel and will be starting training classes and user groups soon. The Fusion System will significantly expand the data analysis capabilities of regional preparedness personnel and significantly facilitate collaborative analysis.

5.2 Response Support

- **Emergency managers need situational analysis.** During emergencies, the North Central Texas Fusion System analysts will conduct situational analysis to help emergency managers understand the situation with respect to resources, threats, and potential actions. For example, during a recent weapons of mass destruction exercise, an analyst provided insightful information on who might be involved in the attack and what they might be expected to do next.

- **Emergency managers need as much situational visibility as possible.** The Collin County Emergency Operations Center utilizes the North Central Texas Fusion System as its underlying computer infrastructure. The Fusion System manages and displays valuable information on over 10 large screens. The information includes traffic video, regional weather surveillance camera video, pictometry, Google Earth, weather reports, local news, geospatial displays of demographics, etc.

5.3 Field Support

§ **Field personnel need quick access to multi-jurisdictional data via mobile computers or dispatchers.** The North Central Texas Fusion System team quickly realized that the law enforcement and public health data in the system would be very valuable to officers and investigators in the field. An interface is currently being built so that dispatchers can make one query and quickly get information from all the relevant databases to give to an officer in the field. The interface will soon be extended to the mobile data computers as well. Today, law enforcement officers, for example, do not have access to data from neighboring jurisdictions so this will be a giant step forward.

5.4 Investigation Support

- **Leads needs to be followed quickly after an incident.** The brainstorming sessions indicated that there was great potential for the Fusion System to contribute to criminal investigations including arson. It was conceptualized that the Fusion System could quickly give the investigator information that might normally take weeks to collect and that the investigator would be able to follow the preliminary leads immediately while the odds were high for solving the crime.

6.0 Management Lessons Learned

This section addresses the management team skills and strategies learned by the North Central Texas Fusion System team to keep the costs low and the effectiveness high.

6.1 Leadership Team Skills

In addition to the skills that project leaders and managers obviously need (planning, scheduling, budgeting, public speaking, personnel management, writing, fund-raising, etc), in this section we identify the less obvious skills that we learned were very important.

- **Need a respected, consensus-oriented and visionary leader**. The North Central Texas project has been successful greatly because the leader was already highly respected across the region. Because that respect was already established, when he asked people to come to conferences or participate in brainstorming sessions, for example, the requests were not questioned. Additionally, his consensus-oriented style allowed regional people to participate in decisions and not feel that concepts were being forced upon them. Because an effective regional fusion system is such a major departure from “business as usual”, it is extremely important that the leader have a clear vision of what is needed and the leadership skills to persevere in actualizing that vision.

- **Need an experienced, organized, communications-oriented project manager.** An experienced, strong day-to-day project manager is also needed. This not a job for a beginner because a fusion system development project is very diverse and complex. Optimally the manager would have a technical background, be a strong presenter, have proposal-writing skills, be accomplished as a cross-organization meeting facilitator, be able to coordinate large events, have negotiation skills, and, most importantly, the ability to keep the project team focused and moving toward the optimal solution.

- **Need an experienced, broadly capable and visionary technical leader.** The technical leader for the North Central Texas Fusion System has designed and built similar systems for federal agencies so he brought extremely valuable insight into what comprised an effective fusion system. He had also conducted analysis similar to this program so he brought a mature vision of what the system needed be able to do to support valuable analysis. Additionally, he was a jack-of-all-trades, able to personally do most of the design, product selection and coding. It will be hard for other fusion systems to find someone so well qualified, but the more experience, maturity, and broad experience the technical manager has, the better.

- **Need an experienced intelligence analyst.** The analysis leader for the North Central Texas Fusion System comes from years of in-depth experience in the intelligence community. As a result, he has been very helpful in designing and implementing a valuable system. He also provides high credibility and valuable insights during demonstrations and training.

6.2 Feedback Related Strategies

- **Use every opportunity possible to publicize the project and get feedback**. Our experience was that we actually spent more time "selling" the system concepts than we did building the system. It is very easy for a region to fall back to "business as usual" if there are not almost constant reminders about why the fusion system is needed. Additionally, it is impossible to reach every stakeholder at once so numerous communication sessions are required. To illustrate the magnitude of what is required, the North Central Texas Fusion System has held two large regional conferences, presented 43 briefings, held three press conferences/releases, launched an informational website as www.fusionsystem.us, written nine major proposals, held 7 brainstorming sessions, and conducted 200 demonstrations in the past year. In each of these situations, the team solicited and listened to suggestions and observations. Frequently these observations influenced the system. We encourage fusion system managers to view these activities as opportunities rather than as disruptions.

- **Seek guidance and help from senior supporters and external experts.** The North Central Texas Fusion System was very fortunate to have numerous advisors and supporters. Two examples are cited here. All of the County Commissioners were excellent supporters, but one Commissioner met with the team leaders more than 20 times, usually over breakfast, to advise the team on strategies and plans. He also championed the system at press conferences and stakeholder conferences. His encouragement was also invaluable to the team when the going was rough. Another example of very valuable supporter was a local university Vice President who sponsored one of the conferences and pressed the team to take actions beyond what would have normally happened. We hope that other fusion system projects are as fortunate in this area as we have been.

6.3 Contractor Selection Strategies

A small company was selected for the North Central Texas Fusion System because of their experience on similar systems at the federal level and because the leaders had proven their visionary leadership during the concept development phase.

- **Minimize the costs by selecting a contractor who can apply experienced people and has low overhead.** A Fusion System has the potential to be extremely expensive. We found that there were two significant factors in minimizing and controlling the costs. One was to contract with an organization that understood, based on experience, what was to be done and could clearly describe the product to be produced in writing. A low burdened hourly rate was the second big factor. We

found that some companies, for example, burdened their hourly rate heavily with the costs of support organizations, research, and facilities.

- **Carefully analyze the long-term maintenance costs.** Be sure to consider both the short-term and the long-term costs of any solution being considered. Sometimes vendors will offer a low up-front cost with prohibitive long-term costs, so be sure to analyze the entire life-cycle costs.

- **Put a fixed price contract in place.** The contract should clearly define the deliverables, schedule, reporting, and the fixed price.

6.4 Funding

To date the North Central Texas Fusion System has been funded by local taxpayer dollars and homeland security grants. The spending to date has been about $1 million, of which 10% was for development, 20% was for software, 10% was for the facility, 20% was for media equipment, 30% was for telecom and 10% was for computer hardware. The on-going personnel and software maintenance costs for the current system are approximately $100 thousand per year.

The North Central Texas Fusion System team has spent a great deal of effort soliciting funding from federal and state level organizations. Although our efforts were always met with great enthusiasm, we have not received any funding directly from any federal or state level organizations. It has become clear that a professional lobbyist would be required for federal funding.

7.0 Conclusion

This document is a work in progress that documents the thinking at a point in time, specifically April 2007. The Fusion System team plans to update this document periodically so the lessons we will no doubt learn in the future can be incorporated.

If you have questions or comments, please contact Kelley Stone at 972-548-5537 or kstone@co.collin.tx.us.

Deploying and Operating an Effective Regional Fusion System

Lessons Learned from the North Central Texas Fusion System

2008

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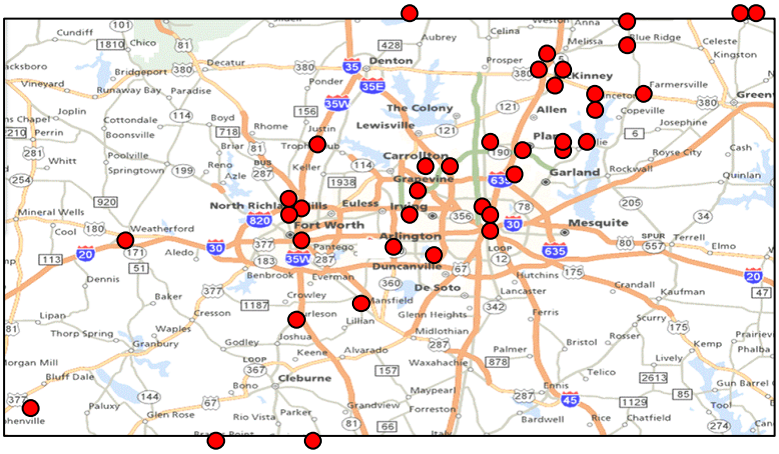
Deploying and Operating an Effective Regional Fusion System
Lessons Learned from the North Central Texas Fusion System

1.0 Introduction

This document is written for planners, developers and operators of regional fusion systems. It encompasses the Guiding Principles for the North Central Texas Fusion System and observations on specific lessons learned during consensus building, deployment, operations and management. There is also a discussion of the sharing and interface guidelines with private security, and state and federal organizations. If you can only read one section, it should be Section 2 - Guiding Principles, because this section describes the characteristics of an effective fusion system. These principles are very important and may not be obvious.

The North Central Texas Fusion System became operational in February 2006. The stakeholders include multi-jurisdictional homeland security, law enforcement, public health, fire, emergency management, private sector security groups and residents as well as state and federal agencies. The Fusion System is primarily focused on the prevention and early warning of natural, accidental and intentional disasters. The Fusion System is also used to support emergency response, field personnel, and investigations. The more than 100 users are from across the 16-county North Central Texas region as shown in the figure below. The project team includes managers, technologists and analysts with deep and relevant experience in local law enforcement, public health, emergency management, and national intelligence.



Users from 42 Regional Jurisdictions/Agencies

The Fusion System is physically located in a secured facility north of Dallas to minimize impacts of large-scale disasters occurring in the downtown Dallas or Fort Worth areas. The Fusion System is a tool for users across the region to share local multi-disciplinary data and access data collected from state and federal sources as well as open sources. Users, such as analysts, emergency response managers, dispatchers, and investigators,

access the system from their own offices via the Internet through secure browser interfaces tailored to each discipline. Reports and alerts are also distributed via email to the stakeholders. Most of the reports are all-hazard and all-discipline focused. They look at trends, observations and predictive elements primarily in support of prevention and preparedness.

The system capabilities include the following items. Additional details on the system are distributed throughout the remaining sections of this document.

- a data collection and aggregation approach that allows analysts to “connect the dots”;
- algorithms that drive the automatic collection of data needed for analysis;
- automatic collection, format, conversion, indexing and storage management per a user-specified schedule;
- tools that automatically detect and graphically display relationships between people, places, and events found in data from open sources;
- access management that assures data is only made available to authorized users and assuring compliance with all statutory requirements and established protocols;
- models that detect pre-incident indicators and draw attention to potential threats;
- analysis tools that extract, visualize, and summarize key concepts from enormous quantities of data.
- near real-time access to multi-jurisdictional data by law enforcement officers in the field;
- tools that automatically and continuously gather targeted data based on user-specified topical requests;
- sharing of data from many jurisdictions and from many organizations at local, state, and federal levels so that disaster response managers can better see the “big picture” including weather, traffic and communications from the field; and
- bringing together of multi-jurisdictional information from law enforcement, public health, fire and emergency management for the post-event investigations.

The North Central Texas Fusion System has received numerous accolades including:

- Selection by DHS as a regional fusion system in which a DHS liaison has been embedded and a Homeland Security Data Network (HSDN) interface has been installed
- Subject of congressional recommendations to U. S. Department of Homeland Security (DHS) Secretary Michael Chertoff
- Winner of Best Practices Outstanding Innovation Award from the Association of Texas Counties
- Designation as a regional fusion system for the State of Texas by Steve McCraw, Texas Director of Homeland Security.
- Subject of two region-wide, all-discipline conferences
- Commended for contribution to solving a local murder case
- Regional coordination center for weapons of mass destruction exercise
- Central data sharing archive for regional gang criminal investigations
- Selected by State of Texas to provide an analysis of recent border operations

2.0 Guiding Principles – Be Sure to Read This First

This section contains the seven guiding principles that have been foundational to the North Central Texas Fusion System. Please read this section first because all the lessons learned are derived from these principles. Please pay particular attention to these principles because the North Central Texas Fusion system team's experience says that all these guiding principles are critical to an effective Fusion System.

Guiding Principle 1 – Processing tools and the aggregation of data across jurisdictions and across disciplines are required to achieve the benefits of fusion.

It is easy to simplify a Fusion System concept so much that the resulting system does not achieve any significant objectives. Single jurisdiction and single discipline systems fall into that category because they are not useful for the inevitable situations where a disaster or crime crosses jurisdictional and disciplinary boundaries. Fusion Systems need to be designed so that clues, pre-incident indicators, and linkages across multiple sources and places can be aggregated to form a big picture. Systems that are just a collection of hyperlinks for humans to click on also fall into the not very useful category. Because of the enormous amount of data in a Fusion System, it is not practical for humans to uncover obscure linkages and pre-incident indicators in the data. Tools that have access to all the data can organize it for visual review by humans. Finally, systems that give one person access to a subset of the data, another person access to another subset of the data and so on, are not effective. Inevitably, each human will filter the data they share and may not even recognize the need to share a piece of data such that the opportunity to deduce meaningful intelligence is missed.

Guiding Principle 2 – Visualization and analysis tools are essential for "connecting the dots".

Fusion Systems, by design, contain massive amounts of data. It is not practical for humans to constantly, thoroughly and quickly analyze that much data. There are very powerful automated visualization and analysis tools, however, that can organize and present the data visually for the human analyst, even drawing the analyst' attention to potential connections and pre-incident indicators found in the data.

Guiding Principle 3 – The most important objective is disaster prevention.

Fusion Systems can contribute significantly to all phases of operations, including the support of disaster responses, personnel operating in the field, and investigations. It should be noted, however, that there are already many systems, procedures, and personnel in place to support the response-oriented activities. To state the obvious, it is far more important to prevent a terrorist attack than to just respond well after it occurs. It is far better to provide early warning of bad weather so that people can take cover than to just get the injured people to the hospital quickly. Be forewarned, that although there is a great deal that can be done to prevent terrorism particularly, the design is challenging because everyone tends to think in terms of response and recovery.

Guiding Principle 4 – Disasters are best prevented by multi-disciplinary organizations

Terrorists, criminals and other hazards are asymmetric in general and cross many disciplines to achieve their goals. Local law enforcement, public health and other single mission organizations do not have the charters to cross disciplinary boundaries. Regional fusion systems and centers should report to a broader organization such as a county or state department of homeland security with the added coupling to public health, emergency management and fire. This allows intelligence analysts to span disciplines in searching for threats. Analysts working in these centers should be licensed in appropriate disciplines such as law enforcement and public health.

Many fusion centers have been setup within local law enforcement organizations. This can severely limit their ability to cross disciplinary boundaries for several reasons: 1) their mission is law enforcement, 2) their primary mission is to provide support for the jurisdiction in which they reside and 3) there is usually activity to keep them busy on tactical tasks so that strategic intelligence is neglected or minimized.

Guiding Principle 5 – The more data the better.

There is a natural human tendency to summarize, filter, or limit data. This is not a healthy approach for a Fusion System, however, because the key piece of data that solves a crime or identifies an imminent terrorist attack is likely to be in the data that is discarded. The Fusion System team should strive to bring together as much data as possible from as many sources as possible and in as much detail as possible to maximize the potential for finding the key data or being able to put together a complete picture.

Guiding Principle 6 – Cross-disciplinary analyst(s) need to be assigned to constantly explore the data and test hypotheses.

The analysis process for a Fusion System is very different from an investigation for prosecution, very different from a database query, and very different from a reporting system. It is more like the intelligence collection process because it entails developing and testing hypotheses; studying linkages and patterns in the data; and sharing known information to solicit other related information. The goal would be to uncover indicators that can help authorities to preposition resources to head off an incident by changing the circumstances leading up to it. It takes a dedicated, open, tenacious, curious and proactive person to achieve the full benefits.

Guiding Principle7 – Data is shared best through a web interface-based system

Use of web-based interfaces to allow both interactive and software agent-based queries of information residing on external fusion systems can provide rapid sharing of information. The data can be managed by the data generators instead of being managed by a third party who does not understand the data or the collection environment. Sharing via web-interface will also result in lower costs of implementation and shorter times to operational states (the ultimate goal). We found

that this approach worked best for sharing with regional users as well as sharing with other fusion centers.

Note that each fusion system has many data types including both structured and unstructured data. More than half of the data on the North Central Texas Fusion System are unstructured products such as autopsy reports, inmate telephone recordings, case reports, weather reports, public health reports and open source data. The National Information Exchange Model (NIEM) is used for exchange but it only applies to structured databases. This implies that these centers 1) know how to handle the data, 2) know how to safeguard the data, 3) know how to handle expunged records, and 4) have the capabilities to extract information both from structured and unstructured sources. We are formatting for exchange using the NIEM model but we feel that the web-based exchange of information rather than the NIEM-based exchange of raw data is a better generalized approach.

3.0 Consensus Building Lessons Learned

An effective Fusion System incorporates new ideas and tools that are not automatically in everyone's knowledge base. An effective Fusion System must span organizations that are not used to working together and may not even know each other. Building consensus on a simple project is difficult – building consensus on an effective Fusion System is very non-trivial. The North Texas Fusion System team has spent 3 years building regional awareness and consensus. To date we have:

- Met with 3000 stakeholders from coast to coast
- Sponsored 2 regional conferences
- Held 7 region-wide brainstorming sessions
- Had 40 vendors and standards meetings
- Visited 11 other facilities for ideas
- Got feedback from over 200 demonstrations

Some of the lessons learned are described in this section.

3.1 Building Consensus on Fusion System Concepts

- **The team needs to be articulate, tenacious, passionate about the concepts, and willing to do hundreds of customized briefings and demonstrations.** The lesson we learned was clear – the project would be "sold" through thousands of personal interactions. Fortunately, it was the nature of the team members to be respectful of everyone's ideas; to package the concepts in words, pictures, and examples that were relevant to the recipient; and to stay at the concept level rather than getting into the technical "weeds".

- **If what you are doing is right for the region, then be bold.** Within a local or a state organization, there are people who have the responsibility for making decisions and leading. At the regional level, generally no single person has that authority, so decisions are often caused by whoever is bold enough to assert their point of view.

Our advice would be to do some soul-searching about whether what you want to assert is really what's best for the region. If it is, then take the actions to make the right thing happen. In the case of North Central Texas, for example, the Fusion System team boldly held conferences, established websites and sought Congressional funding in the name of the region. Over less than a year's time, the Collin County Fusion System became the North Central Texas Fusion System in a very natural way.

3.2 Building Consensus on Data Sharing

We definitely encountered far less resistance at the regional level than is exhibited at the federal level. However, we found that every organization's default position is to not share their data. This position is caused, largely, by fear of losing control of the data or of the data being used inappropriately, unethically, or illegally. There are also concerns about implementation cost. The North Central Texas Fusion System has been moderately successful with data sharing to date. We had hoped to be in a state where at least half of the key data was being shared by this point in time. In actuality, about one quarter of the key data is currently being shared, primarily because of interfaces taking longer than expected. Some of the lessons we have learned are:

- **Facilitated brainstorming was key to most of our success.** Brainstorming does not force ideas on people, it let's people reach their own conclusions while thinking about a realistic situation. For example when brainstorming on how to prevent a dirty bomb before it is detonated, the participants realize that they need observations from law enforcement, emergency management, fire, and public health to be able to put together the pieces. Teams brainstorming on how to minimize an avian influenza outbreak, realize that all regional jurisdictions need to be prepared to share much more information about hospital resources, airplane manifests, etc than is in place today. People brainstorming on the response to a multi-jurisdictional tornado identify the need for more cross-organizational communications and information sharing than they have today. People brainstorming on using the Fusion System to support a criminal investigation realize that criminals do not restrict their activities to one jurisdiction and that the broader the data, the better. We found that, without fail, the personnel who participated in brainstorming sessions always became supporters and always improved on the previous thinking.

- **Head off concerns about the proper handling of law enforcement and public health data.** Law enforcement personnel justifiably have concerns about law enforcement sensitive data being handled properly. We found that if we started every briefing by explaining how law enforcement sensitive data would only be made available to properly accredited law enforcement personnel and by explaining that every data owner could designate how their data would be used, the concerns became non-issues. We found that public health personnel justifiably had major concerns about the invasion of privacy or violation of HIPAA regulations. In this case, it was critical to explain how the data access was limited to approved public health personnel only and that only the observation, not the individual's name, needed to be shared.

- **Do not require programming from the data providers.** We found that virtually every potential data provider either did not have the programming expertise or the resources to format data for transfer to the Fusion System. We decided early in the project that the North Central Texas Fusion System team would bear the effort and cost of any data sharing implementation. We always announce that early in meetings so the potential data providers stop worrying about the resource problems.

- **Use the Fusion System to help with current issues – it always leads to improved data sharing.** A good example is the use of the Fusion System to help with two active murder cases. In both situations, the law enforcement personnel saw the value of the system to access data and build crime pictures and the value of sharing their information with other jurisdictions.

3.3 Building Consensus on a Consolidated Fusion System

- **Regional conferences established the Fusion System as a regional institution.** Two large scale, cross-discipline, regional conferences have been held so far. In both cases, they were held at major universities, encompassed a large amount of information transfer, and included opportunities for personnel from different jurisdictions and disciplines to interact and share ideas. The conferences were enormously expensive in terms of preparation time and event coordination time, but in each case, a giant step was taken toward a unified vision for the Fusion System.

- **The visible support of legislative representatives and regional executives gives credibility to the project.** The North Central Texas Fusion System team made numerous trips to Austin and Washington D.C. to educate and solicit support for the project. Numerous briefings were also made to regional elected officials, business executives, and college executives. Not only did we receive valuable feedback and encouragement from these people, but their participation and communications gave credibility to the project.

3.4 Building Consensus on Becoming Users of the System

- **Do away with cost concerns by making the system free to users.** Most Fusion Centers try to fund the system through fees to the users. We found this concept to be a significant show-shopper, particularly in the smaller jurisdictions. One of our key decisions was to bear the burden of funding the system. A significant amount of time is spent in seeking funding and writing proposals but, as a result, we have no reluctance to participation.

4.0 Deployment Lessons Learned

This section describes the development and rollout aspects of the North Central Texas Fusion System, particularly the six months of initial implementation. Note that the operational aspects are covered in section 5.

4.1 Collection

Data collection and aggregation are critical to bringing together “dots” to connect. Information about bioterrorism threats can come from local law enforcement and public health reports, medical examiner cause of death sheets, private sector security personnel, state and federal reporting agencies and open sources, for example. The data should be organized to provide only authorized access and to support cross-disciplinary queries by authorized personnel.

- **Develop essential elements of information to help guide collection and to optimize analysis.** An essential element of information (EEI) is a description of the information required from various thematic groups and documentation of what to do with the data. The EEIs are incorporated into a living document that can be updated based on emerging topics and lessons learned during the operational phases.

  The North Central Texas Fusion System EEI document is multi-disciplinary and is divided into categories such as terrorism, public health, major crime, and severe weather. Within these groups are specific topics with information on specific information required, the example data sources, collection frequencies, authorized distribution groups and data handling recommendations. The EEI document is an addendum to the emergency response plan. The applications of the EEI Document are twofold.

  1) The collection sources and query parameters are taken from the document. For example, the North Central Texas Fusion System collects data from many websites daily. The data is collected using both a multi-agent query engine requiring keywords and queries and a website spidering tool that gathers all links within a specified starting Internet address.
  2) Essential elements have been incorporated into analysis tools as options to help improve performance in the identification of “dots” and the “connecting of dots”. For example, the HLS Reporter (Homeland Security Summarization Tool) software carries out entity extractions and summarizations using modes corresponding to the EEI categories.

- **Collect data 24x7 using automated scheduled collection software agents that are not biased in their collection priorities.** The North Central Texas Fusion System is set up to operate 24 hours per day, seven day per week, and 365 days per year. The intelligence analyst and other people using the system typically do not keep such schedules. However, threats from natural, accidental or intentional causes can be emerging at any time. Utilizing software agents to collect data and perform some preliminary analyses can result in the following:

  1) provide continuous collections across all disciplines for data that is time sensitive,
  2) collect data using the essential elements of information for all disciplines that does not leave out information based on preconceived biases or special interests, and
  3) notify analysts when linkages between indicators are discovered.

  The data should be collected using automated collection tools to prevent bias in the data. For example, if an investigator is interested in nuclear threats collects data, it

is likely that data about chemical and biological agents will be collected. It is also unlikely that pre-incident indicators pertaining to all sorts of criminal and terrorist threats as well as public health threats will be collected. An analyst with a law enforcement background will collect different content than an epidemiologist or a trained intelligence analyst. The key lessons learned pertaining to collection is discussed below.

- **Partition new Internet data into separate folders as a function of time.** Google queries of the Internet generally produce results that can span many years and many similar events. For example, when a tornado stuck the North Central Texas region in 2006, a query of the Internet on tornados in the region was made. Results from tornados dating back 10 years were retrieved. When this data is summarized and linked, the multi-year results cloud the current situation.

  The North Central Texas Fusion system overcame this long-term data holding issue by collecting data daily (or at some predetermined frequency) and storing only the new (changed) files into a directory numbered for that collection date and time. Thus, summarizations and analyses of the data can be based on data from a specified time period. The collection procedures also push queries by discipline into specific sub-directories for each date so that disciplinary-focused queries can be carried out on specific time-periods as well.

- **Create data libraries that align with disciplines to facilitate data access management and indexing schedules.** In the North Central Texas Fusion System, data libraries have been organized by discipline to support access and protection. For example, law enforcement and public health data are managed in two different library areas. Within each of these areas, the data is further segmented by jurisdiction. When a user logs onto the system and selects the query function, they only see the data libraries that they are authorized to see. .

  The North Central Texas Fusion System data management and indexing software operates over a range of databases, including Microsoft's SQL Server and Oracle's database products. This solution allows for growth as well as the speed necessary to support hundreds of users. We have used this solution in the past to handle over 200 million files. The data growth is limited only by the storage capacity of the system.

- **Link directly to databases instead of only providing hyperlinks to web pages**. Most fusion centers create user interfaces by bringing together hyperlinks to web pages. Many of these web pages require individual accesses (login and password). One major jurisdiction has more than five of these special access interfaces on their main user interface. This model is NOT information sharing, but simply a means of collocating links for individuals to access websites.

  To achieve the true power of a shared, efficient fusion system, it is necessary to provide linkages directly to the data and databases for each jurisdiction and discipline area in the region, state and federal levels. This allows models and

knowledge discovery tools the ability to operate across these databases and connect the dots.

- **Allow a large amount of time for the implementation of data sharing.** The North Central Texas Fusion System experience was that the agreement to share data was typically benefit-based and quickly reached. What took a long time, however, was the last step where the technical details of the formats and protocols were resolved. We didn't find that the step was technically difficult; it was more an issue of the people being inexperienced, not empowered or overly busy. We have definitely applied ten-fold the amount of time on this activity that was originally expected.

4.2 Software

There are three major types of software used in the North Central Texas Fusion System: 1) commercial-off-the-shelf 2) tailored 3) and custom. The commercial-off-the-shelf (COTS) software includes the major software components for data management, collection, analysis and dissemination. The tailored software components consist of configuration files that support the COTS software and scripts that provide user interfaces and format data so that it can be ingested by the different COTS software packages. The custom software was minimized and restricted to products that were not available commercially. The custom software is primarily in the form of threat models and pre-incident indicator models. The lessons learned concerning software are the following:

- **Invest in enterprise COTS software that is web enabled.** The North Central Texas Fusion System is a distributed environment that allows users to access its functionality and share data from their own offices. The advantages include broader participation, more data sharing, no travel requirements, reduced costs and a faster paced environment to head off large-scale incidents.

  When investigating COTS products, it is advisable to ensure that the products are web-enabled (can be accessed via a browser), that the cost model is not linearly scaled by the number of users, and that there will be no surprise costs for functionality that is sold separately.

- **Invest in COTS indexing and data management software that links to analysis tools and requires minimal configuration.** There are a number of COTS data indexing and querying products on the market. Some require a significant amount of configuration by an expert with many years of experience. The North Central Texas Fusion System team purchased the indexing product that fit the available budget constraints. With hindsight, we see that we made a poor decision because much effort has been required to configure the software and interface with the vendor. It is also wise to purchase as much of the required functionality as possible with the indexing software rather than having the costs and delays associated with the integration of separate products.

4.3 Analysis

Analysis consists of a wide range of processes and algorithms that allow identification of relevant pieces of information to be put into context with a bigger picture. The lessons learned include:

- **Link analysts across the region to provide wide viewpoints and many people working on the data with over-arching intelligence analysts creating global products.** Many domain specialists in the region perform analysis. Epidemiologists and gang specialists, for example, can take in requests for specialized investigations. The intelligence analysts responsible for putting together a global, all hazards picture can integrate the results of these various analysts. By forming a regional network of analysts, the awareness, training and cross-jurisdictional information sharing will increase and the quality of the products will be improved.

- **Utilize graphical analysis, automated summarization, and entity extraction tools to aid in analysis of high data volumes.** As the volumes of data increases, manually identifying and extracting important information elements becomes an overwhelming task. When dealing with massive amounts of data, viewing each piece of data in the context of a given topical area becomes virtually impossible.

  Automated summarization tools bring together "important" sentences or pieces of information on individuals and organizations based on algorithms and the essential elements of information. The summarization process pulls together information from thousands of documents, identifies important documents and enables rapid understanding of the complete data holdings. Automated entity extraction tools extract people's names, addresses, phone numbers, businesses, events and relationships. The results can be ingested into link charts for visual analyses. Automated summarization and entity extraction tools are critical for handling massive data volumes. They also save considerable time and money over the long term.

  Graphical visualization of links and multi-dimensional data has been found to significantly enhance the ability to relate information to the big picture. For example, the North Central Texas Fusion System Intelligence Analyst carried out link analysis of a murder case that helped to identify the suspect and lead to an arrest. Multi-dimension data visualization enables comparing the many dimensions inherent in law enforcement and public health databases. These tools also enable links to maps showing location trends and temporal occurrences of observations and events that could lead to a major incident.

- **Apply foreign language processing tools to aid in understanding of languages used by gangs and terrorists.** Gangs such as MS-13 and Islamic terrorist groups often communicate in languages other than English. These languages can include Arabic, Spanish, and Chinese as well as slang or code words. The North Central Texas Fusion System has identified language tools to aid in analysis of foreign and English languages. Some example applications are:

  - Jail inmate telephone calls are typically recorded. Speech-to-text recognition software for these recorded telephone calls can be used to detect conversations were crimes are being plotted or inmates are being recruited to Islamic gangs. If

these conversations are in foreign languages, then automated translations of these conversations can be achieved.
- o Websites that are in foreign languages can be translated to English to see what is actually being said.
- o Television and radio broadcasts can be converted to text and queried for keywords. The video and audio are divided by paragraphs or pauses. Thus, when keywords are located, only that portion of the broadcast needs to be reviewed. Therefore, broadcast data can be placed into the system databases for easy analyses.

- **Maximize query capabilities.** We have found enormous power in the ability to query all of the data at once with a single, simple query. We have also found great value in offering standing queries, geospatial queries that provide information based on a map position, and in threat models being able to query the data for pre-incident indicators.

4.4 Dissemination

Dissemination is the process for making information and alerts available to users of the system. There are two issues concerning dissemination: 1) distribution list and 2) means of distribution. The lessons learned with respect to these issues are discussed below.

§ **Do not distribute regionally focused reports to state and federal personnel routinely**. Evaluation of threats to a region sometimes involves analysis of events, relationships and trends that come from outside of the region. For example, tracking emerging infectious disease trends or looking at illegal alien migration into the region involves data collection and analysis of the big picture and how it affects the region. We have found that some state and federal representatives view this analysis as getting into their "turf". We have found that some state and federal representatives think that the role of a regional Fusion System is simply to provide information to them, apparently not understanding the responsibility the Fusion System has to the region. We initially sent the North Central Texas Fusion System bulletins and reports to many people inside and outside the region. The information dissemination has evolved, however, such that the numerous bulletins and alerts that are regional in focus are distributed only to regional stakeholders. Specific alerts derived from local law enforcement and public health data are shared with state and federal agencies when the information would be relevant and valuable to them.

- **A combination of pushed and pulled information access is required.** The North Central Texas Fusion System algorithm is to push out all-hazard information to the broad user base on a regular basis via email. A subset of the constituents also has or will have secure logins to the system so that they can access the information they are authorized to see. Authorized users have access to the secure chat function as well. Note that law enforcement sensitive data and public health private data are distributed through limited email

distributions or through secure system logins, depending on the nature of the information.

4.5 Hardware

From a hardware perspective, the lessons learned include the following:

- **Provide backup equipment to support security and redundancy needs.** We recommend the following backup equipment:
  - An uninterruptible power supply that lasts for at least 2 hours
  - Backup servers for websites
  - Backup servers which automatically copy the data in real time
  - Backup copies of the data in a separate location
  - Backup Fusion System in case of facility destruction (we currently utilize an engineering testbed which is also used for maintenance and development support)
  - Redundant network interfaces
  - A fiber network that does not utilize telephone switches

- **Provide a high bandwidth and secure network to support data collection and a distributed user base.** High bandwidth fiber internet service providers or the local colleges and universities have infrastructures that can be leveraged. The North Central Texas Fusion System, for example, has a goal to utilize an existing 10 gigabit per second fiber network of the local community college to connect county and city offices. There are also plans to extend this network to the entire region, state and nation using the Internet 2 (622 megabit per second) backbone of the local university consortium. It also utilizes dual internet service provider feeds (one for input and one for output) for security reasons and to ensure sufficient bandwidth to the over 300 users in the region.

4.6 Integration

Integration is critical to ensuring that all commercial-off-the-shelf (COTS) software is properly configured; that data is passed between COTS software products correctly; that the data can be access, collected, processed, analyzed and disseminated; and that all functions operate the way they were intended. Our lessons learned are based on many years experience in designing and integrating similar systems for the federal and regional governments.

- **Integrate the software packages with a simple user interface and automate the movement of data between the packages.** The North Central Texas Fusion System team found that most users were either very short on time or were not very computer savvy. The software package interface and the data flow between them must be very straightforward and efficient to assure a high level of continued usage by the regional stakeholders. We also found that by not requiring the users to deal with technical details, we reduced the training requirements significantly.

- **Use a spiral development approach to enable operational activities early.** If the system is properly planned and designed, integration can proceed in phases where at the end of each phase there are increased capabilities. The first spiral should provide initial capabilities in a reasonably short period to ensure that basic homeland security protections are in place quickly. If a development test environment is set up, then the spiral steps can be carried out without interrupting operations.

- **Maintain flexibility in design and maximize the use of standards so that the plethora of different data interfaces can be accommodated.** We have learned that virtually every data source and every user has unique interface and operating requirements. There are a number of ways to achieve the required flexibility:

    - Acquire software that can handle many data formats (typically more than 300)
    - Implement NIEM standard for data exchange
    - Design in the ability to interface to many database standards such as Microsoft SQL Server, Oracle, Dbase, flat files and others.
    - Design in the ability to handle extensible markup languages (XML) and hypertext markup languages (HTML)
    - Have resources to rapidly parse files such as XML, HTML, and Microsoft Office components
    - Have the ability to handle standard data interfaces such as the Really Simple Syndication (RSS) standard used by many news feeds and the Global Justice standards for law enforcement data.
    - Utilize CGI programming scripts that can rapidly configure user interfaces typically not supported by commercial products

- **Avoid forcing local jurisdictions to modify their data formats.** Many regions have small cities that do not have the resources to implement upgrades to their databases or computer services. The North Central Texas Fusion System uses the philosophy that city jurisdictions should be provided user interfaces that only require a browser and that the data is accepted in the existing formats. It is up to the Fusion System to add standards-based wrappers around the data for sharing with the state and federal agencies.

- **Leverage other projects when possible.** It is natural for there to be multiple data handling projects going on in a region. The North Central Texas Fusion System team believes that it is best politically and economically to embrace and leverage as many of the other projects as possible. The North Central Texas Fusion System, for example, hopes to leverage a regional project led by the Council of Governments to integrate over 70 law enforcement jurisdictions and provide database access to the Fusion System analyst tools. A similar program is ongoing at the state level where jurisdictions external to the region will be accessible to the Fusion System. Each of these projects is adding the Global Justice XML standards around the local data.

4.7 Security

Security is critically important to the North Central Texas Fusion System for the following reasons:

- The system contains sensitive data from law enforcement, public health and other government agencies.
- Intelligence analysts are developing hypotheses of potential threats to the region and do not want the media or public to assume that they are imminent.
- There is data that needs to be protected for privacy, investigative and security reasons. Examples are autopsy reports, criminal investigation data, and data on suspected terrorists.
- Conversations between government officials, when planning responses to incidents, need to be protected.

The security of the North Central Texas Fusion System utilizes information technology standards employed by the intelligence community. Several of the lessons learned are:

- **Utilize NIST guidelines for operating secure web server environments.** The National Institute of Standards and Technology (NIST) have developed guidelines for operating secure web servers that should be employed in fusion systems. These standards have been developed by many experts and will save the region the expense of attempting to arrive at these standards on their own. The NIST has documentation on establishing secure networks, secure web servers and other secure information technology components necessary to set up a fusion system. The North Central Texas Fusion System utilized layers of security to protect individual databases and used unexpected port numbers. By staying away from these traditional ports, the system is less likely to encounter denial of service attacks and other hacker attacks.

  The North Central Texas Fusion System also has several security layers to protect data in the user interfaces as well as in the operating system and application layers. There are also monitoring capabilities that log when users enter the system and track which web pages and data are being viewed. This logging process provides an evidence trail in cases of data abuse by authorized users.

- **Consider hiring a systems engineer with secure systems experience to set up and test the critical security infrastructure.** We have discovered that most IT organizations do not have the experience in handling secure server environments. Many organizations may need to hire a systems engineer with expertise in secure data handling and web server systems.

- **Organize data by discipline and jurisdiction.** Since the Fusion System is operating with data from many disciplines and jurisdictions, it is necessary to organize the data so that it can be easily protected. The data is best organized by discipline and then by jurisdiction. For example, law enforcement data is contained within the same data storage region, but segmented by jurisdiction. If a user is allowed to view all law enforcement data except certain investigation cases, then the access rules can easily be established. By having the data in a single major

directory, the indexing management and the library access management is straightforward.

- **Operate the system with Secure Socket Layer protocols and do not utilize public website interfaces.** Since the authorized users interface to the Fusion System via the Internet, the use of secure socket layer (SSL) technology with secure certificates is employed to secure the communications. All Fusion System websites should utilize SSL standards so that no information is transferred through unsecured channels.

- **Design for stand-alone computers to handle classified information**. If classified information is to be utilized, then by law, this data must be handled in a Special Compartmented Information Facility and the computers must be disjoint from the servers and networks used by normal fusion system operations. By law, these stand-alone computers must adhere to the DSCID-6 standards. In designing the server room for the Fusion System, allowances for Special Compartmented Information Facilities and secure computer requirements need to be taken into account.

4.8 Roll-out

Once a Fusion System is operational, some may want to instantly let any authorized user start accessing it. We have received requests from all over the region, and even outside the region, for access. Instead of granting access to the system on a first come request, we have set up a more structured process to ensure 1) that the operational processes are understood, 2) that a reasonable amount of functionality and data are available to the users and 3) that the new users experience minimal complications. The lessons learned from this process are the following:

- **Populate data and functions for each discipline prior to roll out to that discipline.** The fusion system will not be satisfactory to the users if there is minimal benefit to them. In each discipline, there are data providers and data users. The data providers should be the first system users in each discipline. The goal is to populate data for each discipline prior to allowing data users access to the system. For example, in the public health area, we set up an interface for the medical examiner and epidemiologist to ingest over 20 years of autopsy data. This provided a baseline of health data for users to query. Similar activities have occurred in law enforcement where data from over 70 jurisdictions was integrated before users were given access. When the users are finally provided access, they will be able to see the power of accessing large volumes of data with powerful analysis tools. It is also important to integrate the data with the analysis and visualization tools before bringing on users.

- **Develop a unique web interface for each user group**. Our brainstorming sessions and other user interactions taught us that each user group needed a unique interface. The North Central Texas Fusion System team found that the users' terminology and interests were significantly different and that there was no hope in having a single user interface is effective for all user groups. These individual

interfaces were developed through collaborating with the stakeholders in each discipline.

- **Apply a rollout process for each discipline.** The user interfaces are tailored to each jurisdiction and discipline in order to 1) utilize familiar terminology and 2) provide applicable functions to each group. Developing these interface requires several steps:

    - Hold brainstorming sessions with regional participants within a discipline area to understand the functional and information sharing needs
    - Work with a small group within a discipline to refine the user interface
    - Roll out the interface to the small group
    - Incorporate feedback after a few weeks of operational application
    - Finally, rollout to the larger population within the discipline

- **Provide training by webinar.** Webinars are an inexpensive, quick way to provide training. They are particularly attractive to the supervisors of the trainees because there is no cost for the training and the trainee can attend the training course from their own office.

4.9 Development Team

The deployment personnel lessons learned included the following:

- **Keep the development team as small as possible while encompassing a mission visionary, an application specialist and a system specialist.** The technical team for the implementation of the North Central Texas Fusion System consisted of only two people, a visionary/application specialist and a systems specialist. Even with an ultra small team that encompassed all the required skills, there were still almost daily cases of one person doing something unknowingly that affected what the other person was implementing. Experience clearly showed that coordination problems go up exponentially with the number of people involved, the project slows down, and the costs go up as more people are added. It is vitally important, however, that the team include all the critical components: a mission visionary (else a simplistic, almost valueless system will be envisioned), an application specialist (else the availability and value of the outstanding commercial products will not be recognized), and a system specialist (else the system will not be secure and robust).

- **Use a development team that has done something similar before.** If the team is starting from scratch, it is extremely likely that the project implementation costs will be in the millions, that the implementation time will be measured in years, and that there will be a high risk that the resulting system will not be very effective. The development of a robust fusion system requires expertise that is not easily developed from scratch - a broad range of development and integration skills; a first-hand knowledge of hundreds of commercial products; and a non-tradition vision of sharing data.

- **Avoid cross-organizational development or hosting.** For the North Central Texas Fusion System, a regrettable decision was made to host the system on County network managed by an internal information technology (IT) group. The development team and the network management team each had reasonable operating objectives but unfortunately, they were dramatically at odds. For example, the IT group had multiple masters to serve so they did not have the same sense of urgency or immediate availability of resources as the development team. The result was more than six months delay in the overall project. Further, the IT group's expertise did not match the project needs. The IT organization also had equipment and network standards that were meant to assure high reliability and security for the County network. Unfortunately, those standards increased the system hardware costs by a factor of four and resulted in reduced network speed by a factor of one hundred. If we could have a "Do Over", we would have made the Fusion System a stand-alone system completely implemented by the development team.

5.0 Operations Lessons Learned

This section describes the operations aspects of the North Central Texas Fusion System. This section is organized by the different phases that the system supports. Note that the deployment aspects are covered in section 4.

5.1 Prevention, Preparedness and Early Warning

- **Apply visualization, modeling and analysis tools across all the data to identify threats and pre-incident indicators.** The North Central Texas Fusion System is moving as quickly as possible to having a team of full time analysts. The analysts will proactively build and refine models of how attacks and disasters may occur, and then apply automated tools to look for model's pre-incident indicators. When suspicious indicators are identified, the appropriate law enforcement organizations are immediately given the information in case investigative or surveillance activities are merited.

- **Educate and raise awareness through bulletins.** The North Central Texas Fusion System distributes an Indications and Warnings Bulletin several times a week to over 300 regional personnel. This bulletin contains all-hazard information that is preparedness and prevention oriented. All of the bulletin items are comprised of information from multiple sources and include editorial comments about the relevance of the data to the region. Many of the bulletin items are be-aware-that oriented or be-on-the-lookout oriented.

  The Fusion System also distributes a Directed News Bulletin at least once a week to draw attention to relevant threats and activities being reported in the news. Alerts are also sent out in PDA-ready formats to notify personnel about time-critical threats.

- **Don't discredit open sources.** Reporters often bring forward valuable information and observations. Although one piece of open source data cannot be taken as a fact, multiple corroborating sources bring more credibility and can prompt further

investigation and research. Observations from citizens, private security personnel and regional government personnel can also be enormously valuable. They should be actively solicited.

- **Use classified data for tip-offs if possible.** Regional Fusion Systems do not typically need classified data except as tip-offs to draw attention to potential regional threats. If possible, incorporate at least one cleared person on the team so that classified data can be accessed and/or classified conversations can be held with federal agencies.

- **Train regional personnel to use the tools for their own prevention and early warning analysis.** The North Central Texas Fusion System is currently conducting demonstrations for regional personnel and will be starting training classes and user groups soon. The Fusion System will significantly expand the data analysis capabilities of regional preparedness personnel and significantly facilitate collaborative analysis.

5.2 Response Support

- **Emergency managers need situational analysis.** During emergencies, the North Central Texas Fusion System analysts will conduct situational analysis to help emergency managers understand the situation with respect to resources, threats, and potential actions. For example, during a recent weapons of mass destruction exercise, an analyst provided insightful information on who might be involved in the attack and what they might be expected to do next.

- **Emergency managers need as much situational visibility as possible.** The Collin County Emergency Operations Center utilizes the North Central Texas Fusion System as its underlying computer infrastructure. The Fusion System manages and displays valuable information on over 10 large screens. The information includes traffic video, regional weather surveillance camera video, pictometry, Google Earth, weather reports, local news, geospatial displays of demographics, etc.

5.3 Field Support

§ **Field personnel need quick access to multi-jurisdictional data via mobile computers or dispatchers.** The North Central Texas Fusion System team quickly realized that the law enforcement and public health data in the system would be very valuable to officers and investigators in the field. An interface is currently being built so that dispatchers can make one query and quickly get information from all the relevant databases to give to an officer in the field. The interface will soon be extended to the mobile data computers as well. Today, law enforcement officers, for example, do not have access to data from neighboring jurisdictions so this will be a giant step forward.

5.4 Investigation Support

- **Leads needs to be followed quickly after an incident.** The brainstorming sessions indicated that there was great potential for the Fusion System to contribute to criminal investigations including arson. It was conceptualized that the Fusion System could quickly give the investigator information that might normally take weeks to collect and that the investigator would be able to follow the preliminary leads immediately while the odds were high for solving the crime.

6.0 Management Lessons Learned

This section addresses the management team skills and strategies learned by the North Central Texas Fusion System team to keep the costs low and the effectiveness high.

6.1 Leadership Team Skills

In addition to the skills that project leaders and managers obviously need (planning, scheduling, budgeting, public speaking, personnel management, writing, fund-raising, etc), in this section we identify the less obvious skills that we learned were very important.

- **Need a respected, consensus-oriented and visionary leader**. The North Central Texas project has been successful greatly because the leader was already highly respected across the region. Because that respect was already established, when he asked people to come to conferences or participate in brainstorming sessions, for example, the requests were not questioned. Additionally, his consensus-oriented style allowed regional people to participate in decisions and not feel that concepts were being forced upon them. Because an effective regional fusion system is such a major departure from “business as usual”, it is extremely important that the leader have a clear vision of what is needed and the leadership skills to persevere in actualizing that vision.

- **Need an experienced, organized, communications-oriented project manager.** An experienced, strong day-to-day project manager is also needed. This not a job for a beginner because a fusion system development project is very diverse and complex. Optimally the manager would have a technical background, be a strong presenter, have proposal-writing skills, be accomplished as a cross-organization meeting facilitator, be able to coordinate large events, have negotiation skills, and, most importantly, the ability to keep the project team focused and moving toward the optimal solution.

- **Need an experienced, broadly capable and visionary technical leader.** The technical leader for the North Central Texas Fusion System has designed and built similar systems for federal agencies so he brought extremely valuable insight into what comprised an effective fusion system. He had also conducted analysis similar to this program so he brought a mature vision of what the system needed be able to do to support valuable analysis. Additionally, he was a jack-of-all-trades, able to personally do most of the design, product selection and coding. It will be hard for other fusion systems to find someone so well qualified, but the more experience, maturity, and broad experience the technical manager has, the better.

- **Need an experienced intelligence analyst.** The analysis leader for the North Central Texas Fusion System comes from years of in-depth experience in the intelligence community. As a result, he has been very helpful in designing and implementing a valuable system. He also provides high credibility and valuable insights during demonstrations and training.

6.2 Feedback Related Strategies

- **Use every opportunity possible to publicize the project and get feedback**. Our experience was that we actually spent more time "selling" the system concepts than we did building the system. It is very easy for a region to fall back to "business as usual" if there are not almost constant reminders about why the fusion system is needed. Additionally, it is impossible to reach every stakeholder at once so numerous communication sessions are required. To illustrate the magnitude of what is required, the North Central Texas Fusion System has held two large regional conferences, presented 43 briefings, held three press conferences/releases, launched an informational website as www.fusionsystem.us, written nine major proposals, held 7 brainstorming sessions, and conducted 200 demonstrations in the past year. In each of these situations, the team solicited and listened to suggestions and observations. Frequently these observations influenced the system. We encourage fusion system managers to view these activities as opportunities rather than as disruptions.

- **Seek guidance and help from senior supporters and external experts.** The North Central Texas Fusion System was very fortunate to have numerous advisors and supporters. Two examples are cited here. All of the County Commissioners were excellent supporters, but one Commissioner met with the team leaders more than 20 times, usually over breakfast, to advise the team on strategies and plans. He also championed the system at press conferences and stakeholder conferences. His encouragement was also invaluable to the team when the going was rough. Another example of very valuable supporter was a local university Vice President who sponsored one of the conferences and pressed the team to take actions beyond what would have normally happened. We hope that other fusion system projects are as fortunate in this area as we have been.

6.3 Contractor Selection Strategies

A small company was selected for the North Central Texas Fusion System because of their experience on similar systems at the federal level and because the leaders had proven their visionary leadership during the concept development phase.

- **Minimize the costs by selecting a contractor who can apply experienced people and has low overhead.** A Fusion System has the potential to be extremely expensive. We found that there were two significant factors in minimizing and controlling the costs. One was to contract with an organization that understood, based on experience, what was to be done and could clearly describe the product to be produced in writing. A low burdened hourly rate was the second big factor. We

found that some companies, for example, burdened their hourly rate heavily with the costs of support organizations, research, and facilities.

- **Carefully analyze the long-term maintenance costs.** Be sure to consider both the short-term and the long-term costs of any solution being considered. Sometimes vendors will offer a low up-front cost with prohibitive long-term costs, so be sure to analyze the entire life-cycle costs.

- **Put a fixed price contract in place.** The contract should clearly define the deliverables, schedule, reporting, and the fixed price.

6.4 Funding

To date the North Central Texas Fusion System has been funded by local taxpayer dollars and homeland security grants. The spending to date has been about $1 million, of which 10% was for development, 20% was for software, 10% was for the facility, 20% was for media equipment, 30% was for telecom and 10% was for computer hardware. The on-going personnel and software maintenance costs for the current system are approximately $100 thousand per year.

The North Central Texas Fusion System team has spent a great deal of effort soliciting funding from federal and state level organizations. Although our efforts were always met with great enthusiasm, we have not received any funding directly from any federal or state level organizations. It has become clear that a professional lobbyist would be required for federal funding.

7.0 Conclusion

This document is a work in progress that documents the thinking at a point in time, specifically April 2007. The Fusion System team plans to update this document periodically so the lessons we will no doubt learn in the future can be incorporated.

If you have questions or comments, please contact Kelley Stone at 972-548-5537 or kstone@co.collin.tx.us.

SIGNATURE FORM
COLLIN COUNTY, TEXAS

DELIVERY WILL BE F.O.B. INSIDE DELIVERY AT COLLIN COUNTY DESIGNATED LOCATIONS AND ALL TRANSPORTATION CHARGES PAID BY THE SUPPLIER TO DESTINATION.

DELIVERY TO BE SPECIFIED IN CALENDAR DAYS FROM DATE OF ORDER. ____

- WE **DO NOT** TAKE EXCEPTION TO THE BID SPECIFICATIONS.
- WE **TAKE** EXCEPTION TO THE BID SPECIFICATIONS (EXPLAIN):

COMPANY INFORMATION/PROFILE/REFERENCES
Preferential Requirement: The County of Collin, as a governmental agency of the State of Texas, may not award a contract to a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located (Government Code, Title 10, V.T.C.A., Chapter 2252, Subchapter A). Bidder shall make answer to the following questions by selecting the appropriate radio button or inserting information in the box provided:

Is your principal place of business in the State of Texas? Yes No

If the answer to question is "yes", no further information is necessary; if "no", please indicate:

in which state is your principal place of business is located:

if that state favors resident bidders (bidders in your state) by some dollar increment or percentage: Yes No

if "yes", what is that dollar increment or percentage?

Company Profile: IS YOUR FIRM?

Sole Proprietorship	Yes	No
General Partnership	Yes	No
Limited Partnership	Yes	No
Corporation	Yes	No
Other	Yes	No

List Legal Names in Company:

List at least three (3) companies or governmental agencies where these same/like products/services, as stated herein, have been provided. Include company name, address, contact name and telephone number.

AS PERMITTED UNDER TITLE 8, CHAPTER 271, SUBCHAPTER F, SECTION 271.101 AND 271.102 V.T.C.A. AND TITLE 7, CHAPTER 791, SUBCHAPTER C, SECTION 791.025, V.T.C.A., OTHER LOCAL GOVERNMENTAL ENTITIES MAY WISH TO ALSO PARTICIPATE UNDER THE SAME TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT. EACH ENTITY WISHING TO PARTICIPATE MUST ENTER INTO AN INTERLOCAL AGREEMENT WITH COLLIN COUNTY AND HAVE PRIOR AUTHORIZATION FROM VENDOR. IF SUCH PARTICIPATION IS AUTHORIZED, ALL PURCHASE ORDERS WILL BE ISSUED DIRECTLY FROM AND SHIPPED DIRECTLY TO THE LOCAL GOVERNMENTAL ENTITY REQUIRING SUPPLIES/SERVICES. COLLIN COUNTY SHALL NOT BE HELD RESPONSIBLE FOR ANY ORDERS PLACED, DELIVERIES MADE OR PAYMENT FOR SUPPLIES/SERVICES ORDERED BY THESE ENTITIES. EACH ENTITY RESERVES THE RIGHT TO DETERMINE THEIR PARTICIPATION IN THIS CONTRACT. WOULD BIDDER BE WILLING TO ALLOW OTHER LOCAL GOVERNMENTAL ENTITIES TO PARTICIPATE IN THIS CONTRACT, IF AWARDED, UNDER THE SAME TERMS AND CONDITIONS? Yes No

By signing and submitting this Bid/Proposal, Bidder/Offeror acknowledges, understands the specifications, any and all addenda, and agrees to the bid/proposal terms and conditions and can provide the minimum requirements stated herein. Bidder/Offeror acknowledges they have read the document in its entirety, visited the site, performed investigations and verifications as deemed necessary, is familiar with local conditions under which work is to be performed and will be responsible for any and all errors in Bid/Proposal submittal resulting from Bidder/Offeror's failure to do so. Bidder/Offeror acknowledges the prices submitted in this Bid/Proposal have been carefully reviewed and are submitted as correct and final. If Bid/Proposal is accepted, vendor further certifies and agrees to furnish any and all products/services upon which prices are extended at the price submitted, and upon conditions in the specifications of the Invitation for Bid/Request for Proposal.

THE UNDERSIGNED HEREBY CERTIFIES THE FOREGOING BID/PROPOSAL SUBMITTED BY THE COMPANY LISTED BELOW HEREINAFTER CALLED "BIDDER/OFFEROR" IS THE DULY AUTHORIZED AGENT OF SAID COMPANY AND THE PERSON SIGNING SAID BID/PROPOSAL HAS BEEN DULY AUTHORIZED TO EXECUTE SAME. BIDDER/OFFEROR AFFIRMS THAT THEY ARE DULY AUTHORIZED TO EXECUTE THIS CONTRACT; THIS COMPANY; CORPORATION, FIRM, PARTNERSHIP OR INDIVIDUAL HAS NOT PREPARED THIS BID/PROPOSAL IN COLLUSION WITH ANY OTHER BIDDER/OFFEROR OR OTHER PERSON OR PERSONS ENGAGED IN THE SAME LINE OF BUSINESS; AND THAT THE CONTENTS OF THIS BID/PROPOSAL AS TO PRICES, TERMS AND CONDITIONS OF SAID BID/PROPOSAL HAVE NOT BEEN COMMUNICATED BY THE UNDERSIGNED NOR BY ANY EMPLOYEE OR AGENT TO ANY OTHER PERSON ENGAGED IN THIS TYPE OF BUSINESS PRIOR TO THE OFFICIAL OPENING OF THIS BID/PROPOSAL.

Company Name	
Street Address of Principal Place of Business	
City, State, Zip	
Phone of Principal Place of Business	
Fax of Principal Place of Business	
E-mail Address of Representative	
Federal Identification Number	
Date	
Acknowledgement of Addenda	#1 ¢ #2 ¢ #3 ¢ #4 ¢ #5 ¢ #6 ¢
Authorized Representative Name	
Authorized Representative Title	
Signature (Required for paper bid submission)	

AFFIDAVIT OF COMPLIANCE

I, the undersigned, declare and affirm that my company is in compliance with the Immigration and Reform Act of 1986 and all employees are legally eligible to work in the United States of America.

I further understand and acknowledge that any non-compliance with the Immigration and Reform Act of 1986 at any time during the term of this contract will render the contract voidable.

Name of Company	
Title of Officer	
Name of Officer	
Date:	

In order to better serve our bidders, the Collin County Purchasing Department is conducting the following survey. We appreciate your time and effort expended to submit your bid. Please take a moment to complete the below. Should you have any questions or require more information please call (972) 548-4165.

HOW DID YOU RECEIVE NOTICE OF THIS REQUEST FOR BID OR PROPOSALS?

McKinney Courier-Gazette?	é	Yes	é	No
Plan Room?	é	Yes	é	No
Collin County Web-Site?	é	Yes	é	No
Facsimile or email from BidSync?	é	Yes	é	No

Other

HOW DID YOU RECEIVE THE BID DOCUMENTS?

Downloaded from Home Computer?	é	Yes	é	No
Downloaded from Company Computer?	é	Yes	é	No
Requested a Copy from Collin County?	é	Yes	é	No

Other

Thank You,

Collin County Purchasing Department

CONFLICT OF INTEREST QUESTIONNAIRE
FORM CIQ
For vendor or other person doing business with local governmental entity

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.

By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. *See* Section 176.006, Local Government Code.

A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1	**Name of person doing business with local governmental entity.**
2	é **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)
3	**Name each employee or contractor of the local governmental entity who makes recommendations to a local government officer of the governmental entity with respect to expenditures of money AND describe the affiliation or business relationship.**
4	**Name each local government officer who appoints or employs local government officers of the governmental entity for which this questionnaire is filed AND describe the affiliation or business relationship.**

Adopted 11/02/2005

FORM CIQ

CONFLICT OF INTEREST QUESTIONNAIRE

Page 2

For vendor or other person doing business with local governmental entity

5 **Name of local government officer with whom filer has affiliation or business relationship. (Complete this section only if the answer to A, B, or C is YES.**

This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or other relationship. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire? é Yes é No

B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local governmental entity? é Yes é No

C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?
é Yes é No

D. Describe each affiliation or business relationship.

6

Signature of person doing business with the governmental entity

Date

Adopted 11/02/2005

COLLIN COUNTY, TEXAS
STATEMENT OF NO BID

Collin County is very conscious and extremely appreciative of the time and effort you expend in preparing and submitting solicitations to the County. If you do not intend to bid on this requirement, please complete this form electronically via BidSync or forward to: Michalyn Rains, Contracts Manager, Collin County, 200 S. McDonald St., Suite 230, McKinney, Texas 75069, fax 972-548-4694 or email mrains@co.collin.tx.us.

We, the undersigned, have declined to bid on your IFB/RFP/RFI/RFQ# xxx for the following reason(s):

- Specifications too "tight", i.e. geared toward one brand or manufacturer only. (Please explain reason below)
- Specifications unclear. (Please explain below)
- Insufficient time to respond to solicitation.
- We do not offer this product/s or equivalent. (If you wish to remain on the bidders list for other commodities and/or services, please go to www.bidsync.com to review your previous selections and make the required changes.)
- Our product schedule would not permit us to perform.
- Unable to meet specifications.
- Job too large.
- Job too small.
- Cannot provide required bonding.
- Cannot provide required insurance.
- Bidding through dealer.
- Do not wish to do business with Collin County. (Please explain below)
- Other (Please specify below)

REMARKS:

Company Name:

Address:

City: State: Zip:

Contact Name: Title:

Business Telephone Number: Fax:

Email Address:

Company's Internet Web Page URL:

PRE-PROPOSAL CONFERENCE HELD: March 6, 2009 10:00 A.M.
PROJECT: RFP NO. 02362-09 SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

FIRM	REPRESENTATIVE	ADDRESS	PHONE	FAX
SITCA Solutions	Margaret Rabbitt	400 Greenridge Dr., Coppell, TX	214.415.5527	214.432.0680
McClane Advanced Technologies	Becca Thompson	4001 Central Pointe Pkwy, Temple 76504	254.770.6124 / 254.771.6290	
SRS	Gilbert Hernandez	2722 Kingsbury Dr.	Garland TX 75040	214-501-4385
SRS	Mark Macatee	5919 Greenville Ave #110 Dallas	214.717.4900	
SRS	LES ANDERSON	1400 CR 412 GLEN ROSE, TX 76043	8179332669	254-8977927
Collin County Purchasing	Leslie Harper	200 S. McDonald Mckinney TX	4/22	
Collin County	Mickaly Rain	2005 McDonald, McKinney, TX	4/13	

PRE-PROPOSAL CONFERENCE HELD: March 6, 2009 10:00 A.M.
PROJECT: RFP NO. 02362-09 SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

FIRM	REPRESENTATIVE	ADDRESS	PHONE	FAX
CopHwk	Doug Mamroth	7750 E Broadway Blvd	520 574 1519	520 574 0870

PRE-PROPOSAL CONFERENCE HELD: March 6, 2009 10:00 A.M.
PROJECT: RFP NO. 02362-09 SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

FIRM	REPRESENTATIVE	ADDRESS	PHONE	FAX
ALIS INC	R.Y. SIKES	11704 EAGLES GLEN, AUSTIN	512-215-1589	512-242-7041
DIGITALBRIDGE	J. NAYER	2929 E. Riggs Field Rd, Phoenix AZ	602-793-1043	602-374-4562
DIGITALBRIDGE	DAVID GREAVES	1546 N TECHNOLOGY WAY, OREM, UT	801-671-9000	N/A
CCHCS	STEPHEN CLASSERMAN	4300 COMMUNITY AVE	972-548-4354	972-548-4439

PRE-PROPOSAL CONFERENCE HELD: March 6, 2009 10:00 A.M.
PROJECT: RFP NO. 02362-09 SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

FIRM	REPRESENTATIVE	ADDRESS	PHONE	FAX
AIC	Bob Andler	3030 LBJ Freeway # 820, Dallas TX 75234	972-406-5007	972-243-7768
ADB	James R Johnson	4161 Big Sky Rd Santa Fe, NM 87507	575-741-0699	
Collin County	Kelley Stone	4300 Community Ave McKinney TX.	972-548-5537	
Collin County	Jeff Springfield	4100 Community Ave McKinney, TX	972 548 4533	
NOWHERETOHIDE	CHUCK GEORGIO	PO Box 556, Linthicum MD 21090	410 903 6289 Cell	
ADB	Anita Miller	4161 Big Sky Road, Santa Fe NM 87507	575-741-0699	877-281-5153 Fax

C O L L I N C O U N T Y, T E X A S

A D D E N D U M # 1 BID NO. 02362-09

REQUEST FOR PROPOSAL

FOR

SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

DATE: MARCH 9, 2009

NOTICE TO ALL PROSPECTIVE BIDDERS:

PLEASE MAKE THE FOLLOWING CHANGES TO INVITATION FOR BID:

PREVIOUS PROPOSAL END DATE: MARCH 12, 2009, AT 2:00 PM

REVISED PROPOSAL END DATE: MARCH 19, 2009, AT 2:00 PM

ADD TO RFP DOCUMENTS:

“LESSONS LEARNED” DOCUMENT

PRE-BID SIGN- IN SHEET

REVISE EVALUATION CRITERIA (SECTION 4.1.1) AND REFERENCES REQUIRED (SECTION 6.4.1)

PLEASE NOTE ALL OTHER TERMS, CONDITIONS, SPECIFICATIONS, DRAWINGS, ETC. REMAIN UNCHANGED.

SINCERELY,
FRANKLIN YBARBO
PURCHASING AGENT

/jm

Question and Answers for Bid #02362-09 - SERVICES: FUSION SYSTEM DATA AND ANALYSIS DEVELOPMENT

OVERALL BID QUESTIONS

Question 1

Does the work specified under Solicitation 02362-09 require compliance with paragraphs 2.10.1 and 2.10.2? If the project is in excess of $100,000.00, it appears the successful contractor is required to provide a Payment Bond and a Performance Bond to Collin County, each bond equal to the value of the contract. Is this an accurate interpretation of these paragraphs? Lastly, are the stipulations of paragraphs 2.10.1 and 2.10.2 negotiable? (Submitted: Mar 6, 2009 3:32:16 PM CST)

Answer

- No, Payment and Performance Bonds will not be required for this project. (Answered: Mar 6, 2009 3:32:45 PM CST)

Question 2

Is it correct to assume the information provided in response to Paragraph 6.7 and 6.8 will not count towards the 10 page limit of the proposal response specified in section 5? (Submitted: Mar 6, 2009 3:35:28 PM CST)

Answer

- The 10 page limit specified in Section 5 only refers to the material covered in Section 5, so yes, that is a correct assumption. (Answered: Mar 6, 2009 3:36:34 PM CST)

Question 3

Section 5.17- Is it the reference for the employer or our employee. (Submitted: Mar 10, 2009 8:14:00 AM CDT)

Answer

- We are looking for a reference for a previous contract and your company's key personnel's role in the project. (Answered: Mar 10, 2009 8:14:47 AM CDT)

Question 4

Section 6.4.1- Is there a particular reason for one of the references from “from a financial institution with whom the firm has done business" . (Submitted: Mar 10, 2009 8:15:04 AM CDT)

Answer

- This is a standard requirement for all Collin County service providers to ensure that the companies that contract to do work with us are in stable financial condition, and in a position to maintain their financial well-being so that they may complete our project. (Answered: Mar 10, 2009 8:16:53 AM CDT)

Question 5

Is this RFP trying to solicit new technologies & services, or is it simply trying to solicit services to maintain and expand the current products in place? (Submitted: Mar 13, 2009 9:42:32 AM CDT)

Answer

- We are soliciting services to maintain and expand the current products in place. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 6

Section 5.12 Specifications seems to be including services only in the scope. However, in Sections 6.3, 6.6, 6.7, and 6.10, there are requests for answers/information that is much more related to products (warranty, installation, training, cost of updates/enhancements, discount off list price, copies of literature for data and analysis tools proposed, etc.). Is the County expecting the vendor to propose additional products (Analytical tools, data management tools, etc.) to be used in the Fusion System? (Submitted: Mar 13, 2009 9:44:54 AM CDT)

Answer

- The product specific information requested in Section 6 are in the event that there are specific products/tools included in the proposal, but are not any particular evidence of products/tools expected by the County in the

responses to the RFP. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 7
In Section 5.14, the County requests an hourly rate. In Section 6.6, there is a request for total cost, showing a detailed breakdown, that we assume would be based on the Time Schedule proposed in Section 6.5. However, the County never explicitly asks for a fixed price. Will the County accept a time & materials approach? (Submitted: Mar 13, 2009 9:46:08 AM CDT)

Answer

- The County expects to receive bids that include a breakdown of expenses, including hourly labor expenses, and an estimate of the total expense. The final agreement with the successful respondent will have a not-to-exceed maximum funding allowance. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 8
Since the deadline for questions from vendor has been moved to March 13, 5pm, when does the County expect to have answers posted? And if answers are not posted by Monday, March 16, 5pm, would it be possible for the County to consider extending the due date for a few days? The answers to some of our questions could materially affect our response, and less than 2 days to incorporate those answers is not enough time. Ideally we would request 5 business days after the answers are posted. (Submitted: Mar 13, 2009 9:47:24 AM CDT)

Answer

- At this time, there are no plans to extend the bid. You are advised to prepare as much of your response as possible, given the information available at the current time. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 9
In the Lessons Learned document provided in the updated bid packet, there is a discussion around the 3 major types of software included in the Fusion System. Can you provide detailed information about all the software and hardware in the system today (name, manufacturer, version number, etc.)? (Submitted: Mar 13, 2009 9:49:30 AM CDT)

Question 10
Since the Lessons Learned document is dated April 2007, can you provide a high-level overview of what changes have been made to the system in the last 2 years? (Submitted: Mar 13, 2009 9:50:14 AM CDT)

Answer

- A revised Lessons Learned document will be uploaded as additional documentation to this solicitation. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 11
Section 5.13 states that the proposal shall not exceed 10 pages and must cover 5.14 (hourly rate), 5.15 (experience of personnel), 5.16 (resumes of at least 2 personnel), and 5.17 (references). However, in Section 6.0, there are several additional sections required: 6.1.1 Firm Overview, 6.3 Proposed Products/Services, 6.5 Time Schedule, 6.9 Other Projects. Are those additional responses to be included in the 10 page limit? This question is to clarify the earlier answered question asking about sections 6.7 and 6.8 only as not being included in the 10 pages) (Submitted: Mar 13, 2009 9:53:20 AM CDT)

Answer

- The 10 page limit identified in 5.13 only refers to the information requested in Section 5. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 12
Should responsed be provided to any of the other items in Section 5.0? For example, should the vendor provide descriptions of how we would implement the new functionality listed in Section 5.12, such as integrating with geospatial information and developing new customized websites. (Submitted: Mar 13, 2009 9:55:58 AM CDT)

Answer

- A successful approach to section 5.0 would be to provide a high level response to how your company has resolved these implementation challenges in other situations. In your proposal, we are looking for examples of your methodology in solving these types of challenges, not the solutions to the problems themselves. (Answered: Mar 13,

2009 10:56:56 AM CDT)

Question 13

On page 5, section 1.8, it says the response can be submitted in electronic format via BidSync. Is this the County's preferred method for receiving our response? If so, we assume that 4 copies are not required, and that 5 copies of descriptive literature about data and analysis tools would not be required (as requested in Section 6.7.). (Submitted: Mar 13, 2009 9:58:03 AM CDT)

Answer

- There is not a preferred response method; either paper response or electronic submission is fine. If you respond electronically, you can attach any descriptive literature as a pdf to your proposal. (Answered: Mar 13, 2009 10:56:56 AM CDT)

Question 14

Is this project intended to be a restructuring,upgrade and/or replacement of the current fusion system components? Please refer to the last sentence of 6.4.1 about references. Responders are required to state whether the reference includes "integration, development and restructure from a system already in place" (Submitted: Mar 13, 2009 10:04:36 AM CDT)

Question 15

Since the requirement for a performance bond has been waved, does this mean that you do not anticipate the price on this bid to exceed $100,000? (Submitted: Mar 13, 2009 10:43:17 AM CDT)

Answer

- The performance bond requirement listed in Section 2.10 is referring to execution of a Public Works project, which this is not. Not requiring a performance bond in this case does not have any relevance to the anticipated cost of this project. (Answered: Mar 13, 2009 11:04:03 AM CDT)

Question 16

Can the NCTFC identify how many and which different databases they currently are working with and how many expect to be added for analysis in the near term (6-12 months)? (Submitted: Mar 13, 2009 10:57:03 AM CDT)